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ARTICLE I. *Reports of Surgical Cases, with remarks by* N. R. SMITH, Professor of Surgery in the University of Maryland.

Morbid state of the Spermatic Cord simulating Hernia.—In June last I was requested to visit, in consultation with Drs. Warner and O'Donovan, Mr. ———, a young man aged about 20, living in Pennsylvania avenue. I was informed by the attending gentlemen that for three days previous, he had been laboring under severe symptoms of enteritis, that had in no degree yielded to the active means which they had employed. Complete iliac passion had indeed taken place, the alvine evacuations having entirely ceased, and stercoraceous vomiting occurring at frequent intervals. The pulse was small and frequent; the extremities cold; the countenance hippocratic; the belly tumid, tense, and tender to the touch. The medical gentlemen in attendance informed me that within the last six hours they had discovered a swelling in the left inguinal region, apparently affecting the spermatic cord. All the symptoms of strangulated hernia being present, it of course immediately occurred to them that a concealed hernia had previously existed, and that it had now become in a degree manifest by the increased tumefaction of the parts concerned. They regarded the case, however, as one of obscure and doubtful character, and such indeed I found it.

The scrotum was much enlarged, but this was manifestly an œdematous swelling. Extending from the internal ring along

the course of the cord was an elongated swelling, of a firm, unyielding feel, and evidently issuing from the ring. It was sufficiently obvious that no intestine could be involved in the tumor, as the characteristic elasticity was entirely wanting. It was not so easy to determine, however, the part which the omentum bore in the case. We could not, it is true, distinguish the cord from the tumor, and we were perfectly aware that, after all, the enlargement might prove to be nothing more than one of the cords itself; but supposing a semicongenital sac to exist, it was manifest that a portion of omentum might have been thrust within the investing membranes of the cord, and become strangulated at the ring, or neck of the small sack. Certainly the existence of such a tumor, together with all the symptoms of strangulated hernia, justified such a conclusion.

The patient was now so exceedingly low as to render an operation, under any circumstances, extremely doubtful in regard to its result. But as death appeared inevitable without our interference, we determined on the remedium anceps. We resolved to cut upon the cord, and at least to reveal the true character of the local disease.

In the presence of the attending gentlemen, I executed the incision, and quickly exposed the cord. It immediately became apparent that the tumor resulted from an enlargement of the cord, caused by the infiltration of serum into the tissues which enveloped its vessels. It was manifest that the fluid had issued from the cavity of the abdomen, and percolated along the cord, even to the scrotum, giving rise to the œdema of that part. The envelopes of the cord not readily yielding to the distention, the tumor of this part became hard and cylindrical. As there evidently existed in this case a high degree of peritoneal inflammation, I inferred that effusion had taken place into the cells of the fascia propria exterior to the peritoneum. This fascia, it is hardly necessary to say, is continued along the cord, and becomes one of the proper coverings of that fasciculus of vessels and nerves, and therefore might easily convey the effused fluid from the cavity of the abdomen.

As soon as the condition of the cord was ascertained, I closed the wound, the patient having suffered but in a very slight degree from the incision. The case terminated fatally on the following night.

A post-mortem examination of the case was made by my friend, Dr. Warner, and the ordinary evidences of high enteric and peritoneal inflammation discovered.

I am at this moment in attendance upon another case of peritoneal inflammation, occurring in a servant boy of my friend, Dr. Cockey. The disease was ushered in by pain in the right lumbar and iliac regions, accompanied with soft puffy swelling above and within the spine of the ilium. This swelling early in the attack was elongated in the course of the cord; and the cord was the seat of considerable morbid sensibility. On one occasion the patient complained of agonizing pain in the testicle of the same side. The condition of the cord, and the presence of the swelling immediately caused attention to be directed to the possibility of the existence of obscure ventral hernia; but a careful examination, and the history of the early progress of the case showed clearly enough that nothing of the kind could exist.

Excision of the Astragalus.—There are two conditions of the astragalus which may require the removal of that bone; the one a dislocation with or without fracture, and the second a necrosis of the same bone. A case of necrosis of the astragalus requiring the operation occurred to me in the Baltimore Infirmary, in 1832. The patient, (from one of the lower counties of Maryland,) was a man of about thirty-five years. He had been affected with disease of the ankle for two or three years, occasional swellings of the joint taking place, resulting in suppuration, the discharge of ill-conditioned and fetid pus, and leaving fistulous orifices. When the patient first entered the Infirmary, he came under the care of my friend Professor Hall, by whose judicious prescriptions his general health had been much improved, and the affected part brought into a more favorable condition. On the expiration of Dr. Hall's term he became my patient, and I then found the ankle in the following condition. There existed a fistulous orifice on each side of the ankle, the one beneath the inner malleolus—the other beneath the opposite. There also existed another on the anterior part of the joint. A sanious and fetid discharge issued from these canals. The patient was totally incapable of enduring motion in the joint, or of sustaining the least weight upon it. He informed me that this state of things had existed for many months.

On probing the joint upon each side of the ankle, the instru-

ment immediately encountered a rough necrosed mass of bone, no part appearing to be invested with membrane. The carious bone could be moved with some degree of crepitation when pressed upon with the steel director, rendering it manifest that the separation of the sequestrum from the living parts had taken place.

I now determined on the removal of the astragalus, and with the advice and aid of my colleague, Professor Geddings, commenced the operation by dilating with the knife and director the inner fistulous orifice, till I was enabled to introduce my finger. The same was also done on the inner side of the joint. I now more carefully explored the dead bone, and discovered that the astragalus, by the progress of caries, was resolved into two or more fragments, and that the whole was much decayed and brittle. Ascertaining that there was a portion on the inner side of the joint which appeared more insulated and moveable than the rest, I introduced a strong pair of polypus forceps, and seizing it, effected its removal without much difficulty. I then seized upon another portion of the carious mass, and endeavouring to displace it, broke off another considerable part, and removed it. After dilating the incision upon the inner ankle, I was now enabled to disengage and remove the remainder of the astragalus. This was accomplished without dividing any of the ligaments of the joint, (except a portion of the internal lateral,) they having been, as well as all other soft parts, detached from the bone by the ulcerative process. When the bone had been thus removed, I found that the finger could be passed entirely through the joint from side to side.

I now placed the limb upon a firm pillow, on its outer side, having applied light and simple dressings. No splints were necessary to give support to the limb, the foot showing no disposition to become distorted to either side. This was probably in a degree owing to the rigidity and firmness of the soft parts around the ankle. No unpleasant consequences resulted. The constitution suffered but little—suppuration took place in the cavity—the soft parts around the joint contracted, and adapted themselves. The case now went on favorably, and after the lapse of a few days, the patient left the house rapidly convalescent. He has since visited the city, and it appears that the ankle has been restored to a state of soundness except as regards the loss of parts caused by the disease. The limb is a little

shorter than the other, and the motions of the joint are in a degree confined; hence there is a considerable halt in his gait; he stands firmly on the member, however, and suffers no pain in walking.

Clinical Remarks on the use of the Bandage.—There is, perhaps, no more valuable agent employed in surgery than the bandage; but like every other efficient means, it is in a corresponding degree subject to abuse. The instances in which I have witnessed the injurious effects of the bandage have been very numerous; so much so, indeed, that I have often been disposed to believe that the evils caused by its improper use, more than counterbalance the good resulting from its judicious employment. It is not so often that the bandage is a remedy ill adapted to the case in which it may be employed, as that it is applied unskilfully. A proper application of the bandage, indeed, is rarely made but by a practised hand, and this most practitioners have no adequate opportunities to acquire. It is to be regretted, therefore, that the bandage, well or ill applied, should be so universally considered a part of the prescriptive apparatus of surgery never to be omitted. The bandage in the days of nostrums and specifics, was often employed upon principles as erroneous as were the ridiculous vulneraries which it bound to the part. In treating a fracture, for instance, it was used for the purpose of preventing the afflux of humors to the part, and to confine and give form to the cellus which was being deposited. Now that the numerous and frivolous reasons given by the older surgeons for the employment of the bandage in all cases no longer exist, custom still insists upon its use.

It was formerly no small part of a pupil's education to learn the forms, names and application of the numerous modifications of the bandage in use. Every part of the body had its appropriate bandage, and each bandage had its appropriate name. It is true that all this served some of the purposes of the surgeon well enough, when

> "Words of learned length and thundering sound
> Amazed the gazing rustics ranged around."

The practice of the Baltimore Infirmary have given me frequent opportunities to notice the mischiefs often occasioned by the abuse of the bandage. Surgical patients are sometimes transported to that establishment from considerable distances, their injuries having been dressed at the moment of their occur-

rence, either in the domestic way, or by some practitioner who is but little accustomed to the application of bandages. As a considerable time often elapses before they are located in the house, the apparatus is not soon removed or re-applied, and we often find the member suffering dreadfully from its tight and unequal constriction. I have seen tapes and narrow bands often completely buried in the swollen and choked limb that has been dressed on account of fracture. In some instances this mischief has so added to the necessary effects of the injury, that it has caused the loss of the member, or even of life.

The general objects accomplished by the use of the bandage are five; 1st, the suppression of hemorrhage; 2d, the confinement of dressings; 3d, the prevention of swelling; 4th, support of parts, and 5th, the expulsion of fluids.

1st. In the suppression of hemorrhage the bandage is by no means to be relied upon with confidence, except under peculiar circumstances. In an article recently published in the Balmore Medical and Surgical Journal, I have endeavored to prove that it is often, indeed, the cause of secondary hemorrhage when applied with irritating tightness and unequal pressure. The timid practitioner is always impatient to hide the wound which he treats in voluminous dressings, and is usually exceedingly reluctant to remove them. But the bandage should never be applied to a serious wound till more effectual means of suppressing hemorrhage have been employed, if any considerable vessel has suffered injury. Should hemorrhage result after the application of the bandage, it is often for a time concealed, and often produces serious mischief by being confined in the wound, and diffused in the yielding tissues. When there has been a considerable loss of blood suddenly, and fainting has occurred, we never apply our permanent dressings until some degree of reaction has taken place, or often there will occur a secondary bleeding which the bandage will not command. When, however, a small artery can be compressed upon a bone; or where blood oozes from many small vessels; or where the hemorrhage is venous, the bandage may be at once resorted to.

2d. The dressings now employed by judicious surgeons in the treatment of wounds, ulcers, &c. are exceedingly simple, and very rarely is any complicated harness of bandages and straps necessary for their confinement. Where no other end, indeed, is to be accomplished by the use of the bandage, I am in

the practice of frequently supporting the lint or compress which covers a wound or ulcer with long adhesive strips. This is frequently preferable when the injury exists on the walls of the thorax or abdomen, as a bandage which encircles the body often gives much annoyance to the patient.

3d. The prevention of swelling is certainly one of the most important ends accomplished by the use of the bandage. Nor is it the mere tumor of parts which is prevented; vessels unduly engorged with blood, even although there may not exist a high degree of inflammation, never perform their recuperative office well, as is manifest from the difficulty with which ulcers heal on the lower extremities. But the bandage is not the only means, or indeed always the best, which we possess. When the diseased part is so situated that we can give it an elevated position, the use of the bandage for this particular purpose is superseded. Thus, in the treatment of fracture of the leg, if the limb can be so elevated as to be slightly above the level of the trunk, it is not likely to become the seat of passive engorgement.

4th. It has always appeared to me that far too much importance has been ascribed to the bandage in regard to the mechanical support which it is supposed to give to fractured members. In the treatment of fractures of the clavicle—certain fractures of the scapula and humerus, it is manifest that they may be rendered effectual in this respect by the manner in which they command the position of the superior extremity; but the support which they give when directly applied over the region of a fractured bone is obviously very slight. Indeed, if they were applied so tightly as to accomplish any thing in this respect, their constriction would be intolerable. I would be understood to speak now only of the bandage which is so frequently applied directly to the member before the splints are adjusted. Those bandages which bind the limb to the splints are, of course, often indispensable; but then the splint is the essential part of the apparatus of support. But the most perfect apparatus for a fractured limb is such as gives easy and equal support to the member, without the necessity of being tightly lashed to it by means of bandages or tapes.

Serious mischief often results in cases of fracture, from the direct application of the bandage to a naked limb. If it be applied soon after the occurrence of the injury, the limb will necessarily swell, and that chiefly at the place of fracture; con-

sequently the bandage is necessarily made to constrict the limb unequally, and then it becomes expedient to relax the dressings. This cannot be done without disturbing the whole apparatus of support. When, however, the bandage is applied exterior to the splint or apparatus of support, there is but little danger that any portion of the limb will become strangulated by its unequal pressure, because one side of the limb is protected from the direct pressure of the bandage by the splint. It is generally easy also to re-adjust the bandage without the necessity of removing the support.

5th. The expellant bandage is one which is undoubtedly often employed with beneficial effects, but this too I have often seen misapplied and abused. When a bandage is so applied as to express a fluid from any recess of an abscess, it must necessarily, in order to accomplish the object, be applied with a greater degree of tightness over that particular part than elsewhere, and hence arises an impediment to the circulation. This pressure also on the walls of the sinus, although it prevents the accumulation of matter in the part, often creates such a degree of irritation, as to impede the healing process. I once had occasion to treat an abscess, resulting from a wound above the knee, and burrowing beneath the exterior muscles. For a long time, while I used other means, I persisted in the employment of the roller, so applied as snugly to compress the walls of the cavity, and keep them as closely in apposition as possible. So long as I continued this mode of dressing, but little improvement took place. I then threw aside the bandage altogether, the parts having become wasted and flabby by its pressure. A little swelling and uneasiness in the part at first resulted, but in a day or two a more healthy excitement appeared to take place, and adhesion of the walls of the abscess was effected.

The above desultory remarks on the bandage are by no means made for the purpose of discouraging the use of that valuable auxiliary, but rather to deprecate that officious interference with the willing efforts of nature, to which surgeons seem perpetually prone.

Extirpation of the Tonsils.—The extirpation of enlarged tonsils is by no means an operation of very formidable character, but it is one which is often necessary, and which is generally accomplished with some difficulty. Hence the multitude and variety of instruments which have been devised for effecting it.

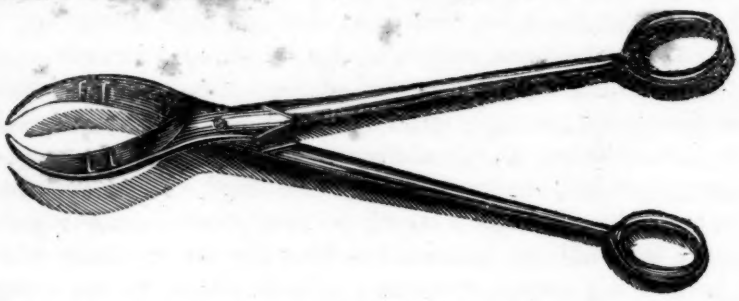
That no instrument for this purpose has yet been employed that is free from important imperfections is obvious, from the fact, that almost every medical journal furnishes some new device for this purpose, intended to supply deficiencies.

The ligature, for the removal of enlarged tonsils, has been, by prudent surgeons, almost entirely abandoned. The bugbear, hemorrhage, which has frightened so many into the continued use of it, has lost its terrors. The fact is, that it is not necessary ever to cut away the entire base of the tonsil; if it be only cut through in the centre, so that one half is removed, it will generally be found sufficient; for, in the first place, suppuration will waste a portion of the remainder, and then the cicatrix subsequently forming will repress it. I rarely attempt to cut away more than two-thirds of the tumor, and this portion of it is not very vascular, nor has it much sensibility. Those appalling instances of hemorrhage of which we read, have no doubt arisen from the fact that the incision has been carried too deeply into the base of the tumor, wounding vessels which do not wholly pertain to the tonsil. This more frequently happens when the tumor is seized with forceps, and dragged out from its recess at the moment that it is excised. The ligature is a tedious, painful, and often inefficacious remedy. I have wholly abandoned its use for some years.

Dr. Physick's instrument for the extirpation of the tonsils is certainly ingenious, and will often be found applicable; but it is clumsy, complicated, expensive, and by no means easy of application. I have generally been foiled in attempting its use. The instrument recently devised by Dr. Rodgers, of New York, is perhaps equally objectionable. The knife is not easily applied, and requires to be aided by forceps. The common scissors do not seize the tumor with such a hold as to complete its division at one stroke, as is desirable. Whatever instrument is employed, the excised portion of the tonsil is almost always left in the throat, and it becomes necessary to remove it with the forceps, or the patient swallows it.

A few days since I undertook the extirpation of very much enlarged tonsils in the throat of a small child. I had at hand almost every variety of instrument used for this purpose, as I anticipated considerable difficulty. I tried nearly all in succession, without being able to effect my object, but finally succeeded clumsily with a pair of large probe-pointed scissors, first having seized the tonsil with slender, toothed forceps. While the dif-

ficulties of the case were fresh in my mind, I resolved to provide myself with something which should obviate similar embarrassment. I had found that the scissors which I used would have answered extremely well had they had a regular lateral curve, and had they been provided with any appendage to prevent the tonsil from slipping from the grasp of the blades in the direction of their points. Something also, it occurred to me, might be appended, that should seize the severed tonsil at the moment of its division.



With these objects in view, I put into the hands of the instrument maker a model of the instrument here represented. It will be seen that it is a pair of scissors, the blades of which have a lateral curve, and each a hawk-bill curve toward the other, so that when the blades are shut, the points pass by each other to some extent. When any thing of the size of a diseased tonsil is seized by these scissors, the moment the middle part of the blades begins to press it, the points meet and begin to pass each other, so that the tumor cannot possibly escape. To the side of each blade there are attached two small steel points, which are bent toward the edges of the blades, so that when the scissors are completely closed, the tonsil exterior to the place of the incision will be seized and held by the points, and brought away from the fauces when the instrument is withdrawn. The blades should be about an inch and three-fourths in length from hinge to point.

In using this instrument, forceps for seizing the tonsil are unnecessary, nor need we employ any thing for the purpose of keeping the mouth open, as when the scissors are introduced, the mouth cannot be closed. The lateral curvature of the blades enables us to press them as deeply as we please into the recess which the tonsil is lodged.

These scissors will be found equally useful for the extirpation of the uvula, and for the removal of hemorrhoids.

ART. II. *Contributions to the Pathology of the Nervous System.* By the EDITOR.

CASE I. *Apoplexy—recovery—Death by a second attack five years afterwards.* An aged black woman, about five years previous to her death, was attacked with hemiplegia of the right side, from which she partially recovered in the course of some months. Considerable impairment of the powers of sensation and motion nevertheless remained. She continued to drag her right foot when she walked; her powers of speech were considerably impaired; and when spoken to, her countenance always pourtrayed the vacant stare and expression of idiotcy. No farther particulars of her case could be obtained.

On the 16th of July, 1827, she appeared as well as usual, and had in the morning carried one or more buckets of water on her head. In the course of the day, however, without any symptoms premonitory of such an attack, she fell down in a fit of apoplexy, and immediately expired. I was requested by my late friend, Dr. Isaac Wilson, to examine the body, which was done about 6 o'clock of the same evening, in presence of him, and my friend, Dr. E. Horlbeck. The body was still warm, but presented nothing of interest externally. The cranium was preternaturally thickened, and at some points so much so, as to be with difficulty broken through with the hatchet. The dura mater adhered intimately with the bone, and when separated, its external surface presented a number of small whitish-colored points, some of them as large as a barley corn, which seemed to consist of organized coagulable lymph, very much consolidated. Posteriorly, this membrane had its natural thickness and consistence; but that portion which covers the anterior lobes of the brain, was considerably attenuated. The arachnoid was studded over with the same species of organized adventitious points, which were observed on the external surface of the dura mater. The posterior lobes of the cerebrum were of their natural volume and configuration, but the anterior were so much atrophied, as not to present more than one half their natural size. On insinuating my finger between the orbiter plates of the frontal bone and the corresponding portion of the organ, the inferior face of the left anterior lobe was slightly lacerated, and a coagulum of blood, as large as a pullet's egg, escaped. On

cutting into the left hemisphere, a large cavity was discovered extending through the whole central point of the hemisphere, and communicating with the corresponding ventricle, which contained several small clots, and a considerable quantity of fluid blood. The walls of the cavity were spongy and flocculent throughout a great part of their extent, and these flocculi were highly vascular. About the centre of the middle lobe was a large cyst, formed by a strong membrane, smooth and uniform upon its internal surface, and which had probably formed around the extravasation which took place at the period of the attack of hemiplegia. The cyst was large enough to contain a common sized hen's egg, and was of a yellowish color. The portion of the brain which corresponded to its lower surface was of a dark brown color, and was of an uneven, indurated, fibrous character. The part thus affected was about an inch in breadth, by two or two and a half inches in length. Situated deeply in one of the infractuosities of the middle lobe of the brain, there was a second cyst of similar dimensions, but possessing all the characters of the one described. The corpus callosum was entirely destroyed on the left side, and the corpus striatum presented a highly vascular flocculent surface. The disorganization extended for some distance into the left crus cerebri. The larger cyst reposed in contact with the middle cerebral artery, which had been ruptured in the original attack, and which now presented a few small points of ossification. The substance of the right hemisphere was considerably indurated, as were also the pons varolii, medulla oblongata, and cerebellum. The floor of the right ventricle, to the extent of one inch and a half, had its lining membrane destroyed, and the adjacent structure seemed to be in a state of ulceration.

This case is interesting, as shewing satisfactorily the steps adopted by nature, in repairing the injury inflicted upon the brain by an extravasation of blood within its substance, and conducting the case to a favorable issue. Reflecting upon the post mortem appearances, and the previous history of the individual, it is manifest, that at the time at which she became affected with hemiplegia, an extravasation of blood took place in the left hemisphere of the cerebrum. The injury arising from this cause had, however, been in a great measure repaired, or at least counteracted, by the development of a cyst surrounding the coagulum, the effect of which was, to isolate it from that

organ, and thus obviate the serious consequences which otherwise would have ensued. The ulcerative process, however, which was excited by the original disease, continued gradually to inflict its ravages upon the adjacent structures, up to the period of the last fatal attack, when in consequence of a considerable artery being opened, either by ulceration, or a rupture of its parieties, they having in the mean time become exceedingly fragile, a sudden extravasation took place in the excavation, and death was the consequence.

Nor is the case without interest in a psychological point of view. The co-existence of extreme atrophy of the anterior lobes of the brain, which according to the tenets of phrenology, are the seat of the intellectual faculties, and the idiotic character of the individual, speak forcibly in favor of their existence in the relation of cause and effect, and furnish an additional fact, or at least argument, in favor of the correctness of the principles of that doctrine.

Case II. *Apoplexy—death in a few hours after the attack.*—Captain D., aged about 45 or 50, had been for some time affected with ascites, for which he had been successfully treated by my friends, Doctors Samuel and Wm. N. Baker. After partaking of a hearty breakfast, he was attacked suddenly, on board of his vessel, with a fit of apoplexy, in which he was seen by Dr. Wm. N. Baker, who bled him freely, and had him conveyed to the Baltimore Infirmary, where he united with me in the treatment of the case. At the period of his admission, he was in a state of profound insensibility; his respiration laborious and sterterous; his pupils contracted; the skin somewhat hot, and of nearly an equable temperature throughout; his pulse somewhat full and hard, and his tongue drawn to the left side. In this condition we deemed it advisable to abstract more blood, and the temporal artery was accordingly opened in front of the ear, and while the blood was flowing from it, the vein in the arm was again opened and allowed to bleed. With a view of assisting these means, and creating revulsion, ice was applied to the head, and sinapisms to the feet and legs. A stimulating cathartic enema was thrown into the bowels, but as it was immediately returned without effect; it was repeated with no better success by means of O'Bierns' rectum tube, which was passed up to a sufficient extent to ensure the projection of the enema into the sigmoid flexure of the colon. As it was suggested that

the stomach was probably still distended with the ingesta which had been taken in the morning, and as the individual was incapable of swallowing, we determined to convey a strong solution of sulphate of zinc into the stomach, by means of the stomach tube, passed down the œsophagus, with a common syringe attached. No effect following, a quantity of a saturated solution of common salt was afterwards thrown into the stomach by the same process. But that organ could not be made to respond.

All the means resorted to for the relief of the patient proving ineffectual, he expired a few hours after his admission.

On proceeding to the examination of the body, we first directed our attention to the head. When the cranium was opened, the membranes were found considerably injected, and a thin stratum of coagulated blood was found reposing upon the surface of the left hemisphere, immediately beneath its arachnoid covering. The lateral ventricles contained a large quantity of fluid blood mingled with serum. In the plexus choroides of both sides, there were a number of small transparent cysts, some of them as large as a pea. The fourth ventricle was also filled by a fluid of the same character as that which occupied the lateral ventricles—and along the right side of the medulla oblongata, entangled in the radicles of the hypoglossal, pneumogastric, and facial nerves, there was a considerable extravasation of dark coagulated blood. The brain in other respects, presented nothing remarkable, except that its vessels were somewhat more injected than natural.

On opening the abdomen, which was somewhat prominent, the cause of the dropsy under which the patient had previously labored, was found to have been a diseased state of the liver. This organ was enlarged to nearly twice its natural dimensions, and was in the condition to which the term *sclerosis* or *scleroma* has been applied. The enlargement and induration was owing in part to hypertrophy of its granules, but chiefly to a similar condition of their interstitial cellular tissue.

In addition to other features of interest presented by this case, not the least is that which has reference to the situation of the extravasation upon the radicles of the nerves of the tongue, lungs, and the stomach. Hence we find, that the tongue was partially paralyzed and drawn to the left side, in consequence of the injury sustained by the nerve which controls the antagonist muscles;—that the respiration was embarrassed and sterto-

rous from a similar implication of the radicles of the pneumogastric nerve; and finally, that the contractions of the stomach could not be roused, in consequence of the influence of that nerve having been suspended. The extravasation upon the surface of the brain, as well as that within the ventricles, must likewise have contributed much to the development of the symptoms presented by the patient, but their influence cannot be so directly traced, or so accurately estimated.

Case III. *Apoplexy—sudden death.—Extravasation upon the whole surface of the brain.*—I was requested by my friend, Dr. Lining, to examine the body of his man servant, who had died suddenly and unexpectedly. His habits had been intemperate, but he had enjoyed good health. On the day preceding his death, he had complained of slight indisposition, for which a cathartic was administered. In a few hours he was found dead.

On opening the cranium, and slitting up the dura mater, the whole of the external surface of the brain was found completely incased in a solid coagulum of blood of considerable thickness, the convolutions being only apparent through it at their most elevated points. The extravasation was most abundant at the base of the organ, where some of the blood was still in a fluid condition. The substance of the brain was healthy, and no other lesion of importance was discovered.

In this case, the extravasation seems to have taken place in consequence of an intense hemorrhagic action of the vessels of the pia mater, as most of the blood was situated beneath the arachnoid membrane, and in the infractuosities of the convolutions. No extravasation whatever existed, either within the ventricles or the substance of the organ. Nor could we by the most careful examination, discover a rupture of any of the larger vessels which distribute blood to the brain. Indeed, as the individual was young, and in the prime of life, the arteries still retained their natural elasticity, and had not yet acquired that fragility of tissue, which results from a slow transformation and degeneration of their tunics, and which so often lays the foundation for apoplexy in the more aged. As he had been laboring under a feverish disposition, which may have predisposed the encephalic organs more or less to take on disease, it is probable, from his habits of intemperance, that the hemorrhagic action, and his final death, may have been induced by immoderate alcoholic potations, taken while his system was in a state of preternatural excitement.

Case IV. *Apoplexy from excessive repletion of the stomach; sudden death—large extravasation in the vicinity of the fissure of sylvius.*—A colored woman, aged about 50, somewhat corpulent, and the mother of several children, after a hearty meal of animal food, peas and rice, tumbled down in a state of insensibility, and immediately expired. I was requested by a medical friend, who had been called to see the case, to make a post mortem examination. As soon as the cranium was opened, a considerable collection of blood was discovered about the base of the brain, much of which was still in a fluid condition. When the organ was removed from its cavity, a large coagulum was found occupying the fissure of sylvius, and extending for some distance into the corpus striatum. There was likewise considerable extravasation within the corresponding lateral ventricle. The arteries of the brain were rigid, much dilated, and studded over with numerous points of ossification. The extravasation had taken place in consequence of a rupture of their tunics.

We next proceeded to examine the stomach; and here we had fully revealed the source of the mischief inflicted upon the brain. This organ was impacted with peas, rice, homminy, and other articles of the individual's repast, to a degree to which it would scarcely be possible to believe could be borne without extreme suffering, and an extensive embarrassment of the functions of the whole of the associated organs. Its condition was such as to encroach upon the intestines, compress the aorta, and the vessels given off by it in the epigastric region, press upon the plexus of nerves behind the stomach, and finally force up the diaphragm upon the lungs, so as to interrupt their play, and thus embarrass the function of respiration, thereby interrupting the passage of the blood through them, and consequently impeding its return from the head. Being thus confined on the one hand to the vessels of the brain, by these causes, and driven upon it, on the other, by the pressure sustained by the aorta, which prevented the distribution of the usual quantity of blood to the lower part of the body, it is not to be wondered, when the fragile state of the tunics of the cerebral arteries is considered, that they should have been unable to sustain the onus suddenly thrown upon them, and that they gave way under its influence.

CASE V. *General Dropsy; cure—subsequent death from Nervous Apoplexy.*—John Gilbert, (colored man,) seaman, aged 50, was admitted into the Baltimore Infirmary, August 20, 1834. According to his own account, he had been attacked with his disease two months ago, at Rio Janeiro, where he remained in the hospital for some time without relief. He is unable to assign any cause for his dropsical condition, but he is reputed to be a hard drinker. His abdomen is enormously enlarged; his legs and arms much swollen, and remarkably firm and unyielding to the touch;—pulse small; tongue nearly natural; breathing short and very much oppressed. ℞ Supertart. Potassæ ℈ ij. Pulv. Jalap. ℈ j.

21st. The medicine has operated copiously, and he expresses himself very much relieved.

℞ Supertart. Potassæ ʒ iss.
Sulph. Potass. ʒ ss.
Pulv. Scillæ ʒ ij.
Tart. Antim. gr. ij.*

A tea spoonful to be taken three times a day—to drink a decoction of the Polygonum Punctatum, E. ad libitum.

℞ Massa Pil. Hydrarg. gr. iv. night and morning.

This course was continued until the 31st of August, the powders being intermitted every third day. During this period, the cathartic and diuretic effects of the remedies were very strongly displayed, and rapidly reduced the swelling of the body. As his mouth was now a little sore, the blue pill was omitted, and not a vestige of the dropsical condition remaining, it was not deemed necessary to continue the other remedies. With the view, therefore, of imparting strength, and overcoming any chronic visceral affection which might exist, he was directed Tinct. Muriat. Ferri gtt. x. three times a day, and to use the following ointment upon the abdomen, in form of frictions: ℞ Iodini ʒ ss. Hydroid. Potass. ʒ i. Unguent. Merc. fort. ʒ i. m. ft. Unguent.

From this time forward he continued perfectly free from his dropsy, and although his convalescence was slow, nothing indicated a recurrence of the disease, or excited any apprehension that he would not gradually regain his health. After continuing to improve for about three weeks longer, he was suddenly attacked, without any manifest cause, with a violent determina-

* Eberle's Practice of Medicine, vol. 2, p. 449.

tion to the head, amounting almost to complete apoplexy—laborious respiration, which afterwards became stertorous, great embarrassment of the heart and general circulation, and impaired sensibility. These symptoms continuing to increase, his insensibility became complete, and his respiration and circulation more disturbed, and he finally died of all the symptoms of the apoplectic state.

His body was carefully examined, as well with the object of ascertaining, if possible, what had been the cause of the dropsy, as determining that which occasioned his sudden and unexpected death.

When the cranium was opened, no extravasation of blood was found within, and the only evidence of disease which existed, either in the brain or its membranes, was slight injection of the minute vessels, and some serous effusion within the arachnoid membrane.

The thorax was next examined with great care, as a suspicion had been entertained of some organic lesion of the heart. The only pathological states of that organ, however, that could be discovered, were, some hypertrophy of the left ventricle; a slight thickening of the semilunar valves of the aorta, and the development of a small nodule of ossification upon one of the limbs of the mitral valve—all too inconsiderable to have occasioned much embarrassment of function. The lungs were healthy, as were likewise their serous coverings.

On opening the abdomen, the liver and spleen, contrary to expectation, were found almost entirely healthy. The peritoneum exhibited no evidences of disease, and no water remained either within this cavity or the thorax. The mucous membrane presented some evidences of chronic villous inflammation, and that of the small intestines, particularly the ileum, furnished some appearances of chronic inflammation rendered acute, and was occupied by a few ulcers of limited extent.—(*Reported by Mr. S. G. Baker.*)

These were all the marks of disease that could be discovered by a careful autopsic examination. It must be confessed, that no one of them, or even the whole taken collectively, can be scarcely considered sufficient to account either for the dropsy, or the sudden death of the individual. To what occasion then should the apoplectic symptoms be referred? Any opinion offered upon this point must of course be conjectural, in the absence of posi-

tive evidence. Yet, if we bear in mind what takes place in many nervous diseases—in epilepsy, for example, hysteria, tetanus, &c. in which the symptoms denote a strong affection of the nervous centres, yet in which, dissection often furnishes no indications of disease in those organs, we may infer with much plausibility, that there was, during the life of the patient, a violent determination of blood to the brain, occasioned no doubt, by a state of active erethism of that organ, but that as soon as this latter condition was rendered extinct by death, there being no longer any cause to invite the fluids to that point, the vessels emptied themselves, in virtue of their elasticity, so as to leave but few traces of disease behind. The condition may, indeed, be regarded as constituting a true state of *nervous apoplexy*, and the case only differing from an ordinary one of that disease, in the absence of the extravasation of blood, which constitutes one of its most striking concomitants.

Case VI. *Fracture of the squamous portion of the temporal bone; injury of the corresponding portion of the brain. Tetanus and death.*—On the 22nd of August, 1826, I was requested by the late professor Ramsay, to examine the body of an individual, who died of tetanus supervening upon a fracture of the cranium, complicated with injury of the corresponding portion of the brain.

The integuments in front of the ear, and about half an inch above the zygoma, presented a laceration of a tripod shape, which was in a state of suppuration. In the squamous portion of the temporal bone, there was a round opening of half an inch in diameter, from which a small fissure extended towards the base of the skull. The dura mater also presented a small irregular opening, corresponding to that of the bone. A small quantity of serosity had collected under this membrane, and the vessels of the pia mater were considerably injected. On a level with the opening of the dura mater, and communicating freely with it, was a large abscess, which occupied the inferior lateral part of the middle lobe of the brain, and implicated a large portion of the corpus striatum, but did not communicate with the lateral ventricles. The orifice of the abscess, was somewhat ragged, and more contracted than its cavity. The cavity itself was large enough to contain two ounces of fluid, but it was merely occupied by the disorganized pulp of the brain. The lateral ventricles contained about an ounce and a half of bloody

serum, and the plexus choroides was highly injected. The left hemisphere was healthy.

In the thorax, some old adhesions were discovered, and the arch of the aorta was considerably dilated.

The liver was enlarged, and its vessels congested. The mucous membrane of the stomach presented numerous patches of a bright red color, having in some places the distended capillaries radiating towards them, and in others confounded in a spot of a bright red color, more or less diffused. The same appearances existed in the mucous membrane of the duodenum, and the other small intestines, but were less conspicuous in the jejunum and ileum. The large intestines also exhibited a few points of inflammation.

This case is particularly interesting, as it presents an example of an extensive lesion of an important organ, to which was superadded one of the most formidable diseases to which the system is liable. But it involves questions which are difficult of solution. In the first place, it is important to decide whether the tetanus was a consequence of the injury sustained by the brain, or whether it owed its origin to the laceration of the integuments of the cranium. This we have no means of doing. In the second place, supposing the injury of the brain to have been the source of the subsequent mischief, did it produce this effect by propagating its influence directly to the voluntary muscles? or mediately, by first radiating irritation to some other portion of the nervous centres, by which it was transmitted to the muscular system. If the results of vivisections are to be relied upon, the latter seems to be the most rational explanation. It has been stated, that the seat of the injury was the central part of middle lobe of the brain; that it implicated the corpus striatum, but did not extend to the lateral ventricle. These are parts which, if experiments upon inferior animals can be considered valid, exercise no influence over voluntary motion, but are exclusively subservient to other offices. This fact was in part known to Haller and Zinn, who ascertained by experiment that the superior parts of the brain exercise no control over muscular motion;—the same fact was established by Lorry, as regards the corpus callosum; and the more recent experiments of Flourens, Rolando and others, have extended it to the corpus striatum, and thalami nervorum opticorum. The same experiments have proved, that the power of exciting the voluntary

muscles is confined to the tubercula quadragemini, medulla oblongata, and spinal marrow. In evidence of this, the following experiments of Rolando may be cited.

Exp. 1. The brain of a rabbit was exposed, by removing the frontal bone, and slitting up the dura mater and the arachnoid membrane. The cerebral hemispheres were then pricked in every direction, without producing the slightest influence upon the contraction of the muscles.

Exp. 2. The hemispheres of the brain of a pigeon were removed by successive slices—the animal did not move.

Exp. 3. The cerebrum of another pigeon was perforated through and through, and was pricked in every possible direction, and sliced; yet the animal remained immovable. The same immobility was observed when the cerebellum was treated in a similar manner. But as soon as the tubercula quadragemini were pricked, a tremulous and convulsive motion was excited. The same experiment was made on a dog, and with a similar result.

Exp. 4. When the tubercula quadragemini of a large dog were pricked, slight convulsions were excited, which became violent when the medulla oblongata was treated in the same manner.

Exp. 5. The optic couches and the striated bodies of a rabbit were first pricked in every possible direction, and afterwards sliced away, without producing any evidences of muscular contraction.—(*Flourens Recherches Experimentales sur les propriétés et les fonctions du systême nerveux, p.* 18, *Paris*, 1824.

To these facts, may be added one of a different kind, tending to establish the same conclusions. Not long since, whilst engaged in making some galvanic experiments upon the body of a criminal who had been recently cut down from the gallows, I introduced one pole of a powerful battery into the cerebral hemisphere, through a small opening made in the cranium, while the other pole was applied to various parts of the body. Not the slightest muscular contraction was excited, although strong contractions were produced when the pole was applied to spinal marrow.

All these circumstances seem to corroborate the conclusion, that the injury of the brain only acted mediately in this case, in producing the tetanic condition,—first, by radiating irritation to those portions of the nervous centres which are endowed with

the faculty of exciting muscular contraction, by which it was transmitted along the motor nerves to the muscles themselves.

Case VII. *Tetanus from a slight lacerated wound of the face—death—two splinters of wood found in the wound.*—A poor man in a state of intoxication, mistook on his way home at night, for the street in which he resided, another which terminated abruptly, by a high embankment, upon the water's edge. Having arrived at the termination, without being aware of his situation, he fell over the bank into the water, and wounded himself slightly upon the external part of the orbit, over the malar bone. The wound, which ranged perpendicularly, did not exceed an inch in length, and did not involve the bone, or the structures within the orbit. For several days he experienced no marked inconvenience, but finally, considerable rigidity of the muscles of the jaw took place, which was speedily followed by well developed tetanus, which increased in violence until his death.

By the request of a medical friend who had been called to prescribe for the case, I examined the wound. It was found that some of the filaments of the portio dura nerve had been lacerated, but the principal mischief seemed to be attributable to the presence in the wound of two splinters of wood, one about three fourths of an inch in length, the other somewhat smaller. We were not permitted to prosecute the examination further.

The chief feature of interest presented by this case is, the comparatively trifling injury by which all mischief was induced. The wound was superficial, and of limited extent. There was merely laceration of the integuments, with an injury of a few nervous filaments; yet the continued irritation, kept up in the part by the presence of the foreign bodies, acting upon a constitution rendered unhealthy by habitual intemperance, was sufficient to give rise to tetanus and death.

Case VIII. *Tetanus.*—Benjamin Wells, stage driver, aged 35, was admitted into the Baltimore Infirmary, on the 28th of April, 1834, on account of several injuries received upon various parts of the body. He was bled, and had a cathartic administered. Confinement to bed, and a low diet were directed and persevered in for several days. On the 8th of May, he was so much better that he took a walk into the city, and on his return was caught in a shower of rain. On the 9th, he complained of soreness of the masseter muscles. ℞ Tinct. opii gtt. lxx. Slept quietly during the day. At 8 P. M. soreness and stiffness of the jaws. ℞ Tinct. opii gtt. cxx.

May 12. Not so well. ℞ Pulv. opii gr. ij—Submuriat—Hydrarg. gr. iv. every three hours—Blister to the back of the neck,—vesicated surface to be sprinkled with sulph. morphia gr. iv.—Frictions with the following ointment: ℞ Iodin. gr. v.; Emplast. lyttæ ʒ iss.; Pulv. capsicii. ʒ ij.; Ungent. mer. Fort. ʒ i.

11. Symptoms more unfavorable—Great difficulty of deglutition. Tinct. opii gtt. cxxx.; milk toddy freely through the day. At 1 o'clock P. M. his bowels being constipated, an enema of turpentine was administered—Tinct. opii ʒ i. per enema, four times a day. The attempt to swallow, at this period, threw him into violent convulsions. The blistered surface was dressed with mercurial ointment.

12. The symptoms of the case still more exasperated. Tinct. opii ʒ i. every three hours, per enema. At 3 o'clock P. M. he expired.

Examination of the body revealed considerable congestion of the pia mater, both of the brain and spinal marrow, and there was likewise some congestion of the substance of the brain; but this was probably the consequence of the large quantity of opium which was administered, as the individual was perfectly sensible to the last, and showed no evidence of disturbance of the functions of the brain. The outer portion of the substance of the spinal marrow did not present any very conspicuous evidences of disease, being only a little more injected than natural. But when the cord was split in a longitudinal direction, the whole of the central portion consisting of the grey colored substance which occupies that part of the cord, was intensely red and injected, and manifested a degree of vascularity altogether unusual.—*Reported by Mr. A. H. Bayly.*

Remarks.—Volumes have been written on the subject of Tetanus, yet after all the attention it has received, its pathology and treatment must still be acknowledged as far from settled. Nearly all pathologists, it is true, concur in referring most of its phenomena to irritation or inflammation of the spinal marrow, propagating their influence from this common centre, along the motor nerves, to the voluntary muscles. Nor can it be very well doubted that this view is correct, since all the leading characters of the disease are such, as to be rationally explained upon such a supposition. It is, moreover, corroborated by dissections; for although reports of cases are not wanting, in which

it has been represented that no lesion whatever could be discovered in the spinal marrow, there are many reasons for presuming that in many instances at least, the examination was confined to the superficies of the cord, which, it will be seen, from the last of the above cases, presented but trivial evidences of disease, when its central, gray colored substance, was intensely red and injected, and furnished marks of a high degree of vascular irritation. All the causes, moreover, which give rise to the disease, whether they consist of physical injuries, or irritants acting upon the first passages, naturally tend to centre their influence upon this portion of the nervous system. All the spinal nerves are composed of sensitive and motor filaments, which are distributed to the whole periphery of the system. The first are the proper recipients of all impressions made upon the parts which they supply, and they transmit them to the spinal marrow as the great centre destined for their reception, from whence the particular impression thus excited, is conveyed by the motor filaments, to the system of voluntary muscles, exciting in them contractions more or less intense, according to the force of the impression. In a similar manner, the same effects are produced by irritants acting upon the first passages. The entire extent of the mucous membrane receives an abundant supply of ganglionic nerves, which communicate with the spinal nerves along the whole spinal column. Each spinal nerve is indeed associated with the ganglionic system, by means of a direct branch of communication; and according to Scarpa and some others, this branch always unites with the posterior, or sensitive radicle of the spinal nerve, and not with the anterior, or motor radicle. Hence, an irritation developed upon any portion of the mucous membrane lining the digestive organs, whether from crude and indigestible articles of food, intestinal worms, or other causes, is readily transmitted to the spinal marrow by this associating filament; an impression is there developed, as under other circumstances, which is propagated by the motor filaments to the muscular system, and spasm or contractions are produced, according to the intensity of the influence operating. Hence, in one case, whether the offending cause by an injury inflicted upon any part of the body, or an irritation developed in the mucous membrane of the stomach and intestines, there may be an inconsiderable disturbance of the nervous or muscular systems, or both at the same time; in another,

moderate clonic spasms, or convulsions, more or less violent and continued; and in a third, violent tonic spasms of particular muscles, or of the muscular system in general, as in trismus, tetanus, &c. The fact, that the most violent forms of tetanus sometimes supervene upon very trifling injuries, does not militate against the correctness of this explanation. The irritation at first developed, is not sufficient to produce such an effect; but when it continues for some time, its influence upon the spinal marrow goes on accumulating, until it acquires a high degree of intensity, when it explodes, as it were, upon the muscular system, through the motor nerves, and excites spasms as violent and formidable as those which are capable of being produced more speedily by a more serious injury. The greater tendency of slight injuries, especially injuries in fibrous or aponeurotic parts, to produce tetanus, than of those which are more considerable, or which affect structures of a different character, is a fact particularly deserving attention, inasmuch as it will assist in explaining some of the most difficult problems in the pathology of the disease. All the white fibrous tissues are nearly destitute of red vessels; consequently when they become injured, but very little vascular reaction can take place within their substance, or in the vascular system generally, since they are placed so far out of the pale of the latter, that it will experience but an inconsiderable degree of disturbance from any sufferings which the tendons, ligaments, aponeuroses, &c. may sustain. The nervous system, however, does not so effectually escape. The sentient nerves receive the whole influence excited by the injury, which is propagated by them to the spinal centre, and from thence to the voluntary muscles, thus giving rise eventually, to violent tonic spasms, even while the vascular system is but slightly disturbed. It is indeed a fact not less worthy of remark, that when vascular reaction takes place in the part, or in the system generally, the development of tetanus is prevented. Hence it frequently happens, that although an individual may have been threatened with the symptoms of this formidable malady, so soon as acute inflammation, or a free suppuration becomes established in the wound, or so soon as a free and open form of excitement of the vascular system shews itself, all the tetanic symptoms vanish, and the danger from that source is considered to be at an end;—the vascular reaction, under such circumstances, giving a new di-

rection to the irritation, and preventing it from becoming concentrated upon the nervous centres, and especially the spinal marrow. Upon the same principles can be explained the great liability of severe lacerated wounds of more fleshy and vascular parts, to give rise to tetanus. The violent contusion and laceration of the delicate vessels so far impair their vitality as to completely destroy their power of reaction, or at least, to render it so feeble and inefficient, that complete reaction, amounting to free healthy inflammation and suppuration, cannot take place. But while this is the condition of the vessels, that of the nerves is different. The injury sustained by them naturally inflicts upon their sentient filaments an intense degree of irritation, which, extending to the points at which they impinge upon the spinal marrow, accumulates upon that part of the nervous system, until it attains a certain intensity, when it is transmitted to the muscular system, and excites the train of consequences already adverted to. It is from this cause, that lacerated wounds, which give rise to tetanus, scarcely ever exhibit any evidences of energetic plastic inflammation, or healthy suppuration; and it is well known, that where these conditions can be excited, not much fear of tetanus need be entertained; and even if symptoms of that disease have appeared, they generally subside with the development of free suppuration from the wound.

It is hence manifest, that in tetanus, the vital correlationship or antagonism of the different systems, is completely suspended or broken up. The nervous ramifications and their centre, and afterwards the voluntary muscles, sustain the entire onus of the disease. Nearly the whole influence of the cause giving rise to the malady, is concentrated upon these systems, while the vascular, and the apparatus of nutrition generally, are divested, to a great extent, of their proper degree of vital force, it being expended upon the nervous and muscular apparatus, in the violent and preternatural acts which they are called upon to perform. Hence, the pulse is generally small, frequent and irregular; the secretions are more or less interrupted and perverted, and other functions appertaining to the system of nutrition are more or less deranged. It was this which led Rush, in speaking of this disease, to remark, that the whole excitability of the vascular system is concentrated upon the muscles; while in fever, it is transferred from the muscles, and concentrated upon the arte-

ries. The same principles naturally lead to an explanation, why it is, that copious bleeding is so often detrimental in the treatment of tetanus, while free stimulation with opium, brandy, wine, and other articles, is frequently productive of the most happy effects. The free abstraction of blood, so far enfeebles the vascular system, as to render it incapable of resisting the tendency of the nervous apparatus to rob it of its vital force, and concentrate it upon itself. It also destroys its power of reacting, and setting up those changes, by which the ascendency of activity in the nervous system can be counteracted. The stimulating influence of opium and other agents, increases the powers of the vessels; and by elevating their activity to a point beyond that possessed by the nerves, they are enabled to abstract from the latter a portion of their vital force, so that an equilibrium between the two systems is either restored, or the action of the vascular obtains the ascendency, and in the development of a general reaction, the mischievous tendency of the violent irritation sustained by the nervous system, is effectually obviated. In bringing about this change, the sedative effects of the opium must likewise be taken into account. While that article stimulates, the operation of its sedative influence upon the nervous system (the part of the organization which more especially experiences this operation) diminishes the susceptibility of that apparatus, and thus renders it less liable to be seriously influenced by the irritating cause, and more favorable to resume its healthy correlation or antagonism with the blood vessels.

From these considerations it is probable, that while the spinal marrow is affected in all cases of tetanus, the character of the morbid process in which it is involved, is not always the same. In some instances, it is unquestionably in an intense state of inflammation; but while this fact is incontestible, it is equally true, that in many instances of death from tetanus, no evidences of inflammation, either in the spinal marrow, or its membranous envelopes, can be discovered by the most careful investigations. In such cases, the pathological state seems to consist in a state of exalted irritation of the spinal cord, without inflammation, or at least, without manifest hyperemia, and to be unattended with any appreciable alteration of the structure or consistence of the part. A similar condition is frequently found in that organ in epilepsy, and some other nervous diseases, and in the nerves themselves, in neuralgic, and other affections to which they are

liable. In many such affections, where the symptoms have been such as to leave no question of the nerves or the spinal marrow being the seat of the disease, the most minute and scrupulous investigations have not revealed the slightest alteration of the physical properties of the parts affected.

Upon these principles may be explained, some of the apparently contradictory results which have been obtained in the treatment of tetanus, by very opposite courses of procedure. It is well known, that some most formidable cases have been brought to a successful issue by copious blood letting; others by active stimulation; some by salivation; and many by opium and other narcotics. When the principal pathological state consists in an active inflammatory condition of the spinal marrow, it is manifest, that the antiphlogistic treatment will be alone competent to overcome the disease, and that stimulation, and the administration of large doses of opium, must be carefully avoided. General bleeding, and the local abstraction of blood from the vicinity of the spine by leeches and cups, and active revulsion by cathartics, and by blisters, moxas, rubefacients, or cauterization along the course of the spine, must, in such cases, constitute our main dependence, and any other remedies must be merely regarded as of minor consideration, and only calculated to meet accidental complications. The disease is rapid in its course, and the remedies to meet it, must be promptly and energetically employed; otherwise it will advance to a fatal termination, before they can be brought to bear upon it effectually. The practice of bleeding in tetanus, it is true, has been very generally condemned; and, in many cases, experience has shewn that it is certainly pernicious. Yet, that there are cases in which it is highly beneficial, it would not be difficult to prove by an appeal to the recorded experience of both ancient and modern times. Aretæus, and others of the ancients, strongly recommended it, and a similar practice has been followed by some of the moderns, although most of them have strongly opposed it. A most formidable case has been reported by Abm. Le Pelletier, which was successfully combatted by the bold and intrepid use of the lancet, aided by the aqueous extract of opium, administered in large doses. Ten pounds of blood were drawn at five bleedings, all practised in the course of three days, before the disease yielded. The bleeding should be followed by the creation of an active revulsive impression along the spine:

and to effect this, nothing will be better than the application of several moxas, or what was used with very prompt success in one case by the late Dr. Ffirth, of South Carolina, bats of carded cotton immersed in oil of turpentine, laid along the spine, and set on fire. In this form of the disease, active cathartics, and all the usual means of creating revulsion and allaying irritation, should also be employed.

But while these principles should govern in the direction of the treatment, where the disease consists in a manifest inflammatory condition of the spinal marrow, or of the nerves ingrafted upon it, a very different course will be necessary, when it depends upon a state of mere nervous irritation of these parts, without inflammation. To abstract blood, under such circumstances, would tend to break down the antagonizing influence of the vascular system, to interrupt that reaction of the heart and blood vessels, which tends so powerfully to resist, or obviate, the tetanic condition, and thereby to increase the violence of the spasms, and exasperate the whole phenomena of the disease. Here we have a simple state of nervous erethism to contend with, affecting the nerves and the spinal marrow itself; consequently, it is in such cases that narcotics and antispasmodics, are the remedies upon which our principal reliance must be placed. Opium must be administered with a bold and intrepid hand, and so long as there are no evidences of inflammation of the brain or spinal cord, the dose must alone be measured by the effect produced. It must not be graduated by grains or hours, but be given to the extent of overcoming the nervous erethism, and subduing the spasms. Hydrocyanic acid has also been employed with much advantage, under the same circumstances; and from its great powers, and the promptitude with which it acts, it promises much advantage. Other narcotics and antispasmodics may also be employed; but, in general, they are either too feeble in their operation, or too tardy in their effects, to deserve much confidence. Tobacco, however, either applied externally, or administered by injection, is a most powerful means of controlling tetanic spasm. With the view of sustaining the antagonism of the vascular system, it is sometimes advantageous to resort to free stimulation. By rousing up reaction, a diversion of irritation is created from the nervous centres and the muscular system, excitement is more equally diffused, and the violence of the disease is abated

in a proportionate degree. With this object, wine, brandy, turpentine, camphor, &c. have been sometimes administered with an unsparing hand, and cases have been reported, in which they alone have proved effectual in conducting the case to a favorable issue. Revulsions along the spine, and indeed to the surface of the body generally, will likewise be beneficial in some cases, by counteracting the tendency of the whole irritation of the system to concentrate itself upon the nervous and motor apparatus;—and with the same object, we have employed large doses of calomel internally. It makes a strong impression upon the entire mucous surface of the intestines, and thereby transfers irritation from the situation where it is productive of so much mischief.

The local injury should be treated upon those principles which tend to allay nervous irritation, and promote the requisite degree of vascular activity in the part. All sources of irritation should be sedulously removed; and with the view of soothing the sufferings of the nerves, anodyne applications should be made to the part, while by warm emollient exciting applications, free inflammation, and healthy suppuration should be established as soon as possible. To secure the attainment of this object, it will sometimes be necessary to resort to applications of even an active stimulating character; but the indiscriminate practice of dressing such injuries with turpentine, cantharides, and escharotics, may prove highly prejudicial.

But after all, difficulties almost insurmountable must be encountered in the treatment of this formidable disease. For although we may draw distinctions, and prescribe rules adapted to each, it is exceedingly difficult, and too often impossible, to discriminate, by any set of phenomena, between the different pathological states with which the disease is connected. Hence it is, that remedies frequently produce so little effect, even when dictated by the soundest judgment, and cases apparently alike in all essential particulars, furnish very different results, under precisely the same course of treatment.

Case IX. *Convulsions recurring at intervals for eighteen months—death—exostosis of the second cervical vertebra encroaching so much upon the spinal marrow as to produce an intersection of one half of its substance, merely leaving the membranes.*—Rather a stout man was affected, at frequent intervals, with violent convulsions and much suffering, for upwards of

eighteen months, during which time he was submitted to a variety of treatment, without any permanent benefit. In the progress of the case, the convulsions became more violent, and recurred at shorter intervals, until he was finally released by death.

At the request of my friend, Professor Dickson, who had occasionally attended the case, I examined the body. Attention was first directed to the brain, which was found indurated, in a very remarkable degree, throughout the whole extent of its substance. The spinal canal was next carefully laid open, so as to expose the entire length of the medulla spinalis and its envelopes. Nothing remarkable was observed, except towards its upper part, where one side of the second cervical vertebra was found to be affected with exostosis, projecting inwards and backwards upon the spinal marrow, and presenting an obtuse margin, which encroached so much upon one of the hemispheres of that organ, as to occasion an atrophy, or intersection, of its corresponding portion, amounting almost to a complete division of the nervous substance of one half the cord, merely leaving the parts connected by the membranes.

There can be but little doubt, that the constant irritation kept up by the presence of the exostosis upon the spinal marrow, was the cause of the violent repeated convulsions with which the individual was so long affected. It is also probable, that the same irritation propagating its influence to the brain, there gave rise to the modifications of nutrition, which resulted in the induration of that organ.

The preparation was preserved, and is still in my collection.

Art. III. *Contributions to Ovarian Pathology.*

Case I. *Ovarian Cyst containing upwards of twenty-three gallons of fluid.* By F. E. B. Hintze, M. D. of Baltimore.—A female, aged about 40, who had given birth to several children, was the subject of this case. About seventeen years anterior to the period of her death, she labored under suppression of the catamenia, and her abdomen becoming tumid, awakened a presumption of pregnancy. The usual period of utero-gestation having elapsed, and the abdominal distension still increasing, medical advice was sought. After an observance for years, of

the prescription of various physicians, and unwilling to submit to the operation of paraceutesis, she at length became so large as to be incapable of taking any exercise, and was consequently confined to her bed until she sunk from exhaustion.

After death, it was found impracticable to inter her body in its enormously enlarged state. Such was her size, that she could not be brought down the narrow stairway of the house, and the joiner was unwilling to undertake the construction of a coffin of such unusual dimensions. For these and other reasons, arising from the unwieldy condition of the body, her friends were induced to consult me upon the most effectual means of diminishing its size.

Upon my arrival, I found the body lying on a double bedstead, her back being near the frame on one side, and her distended abdomen extending to the opposite side. On plunging a trocar through the walls of the abdomen, only a small quantity of fluid, of the consistence of treacle, escaped through the canula. I next made a considerable incision, when numerous large concretions escaped, which emitted a feculent odor. They were followed by a fluid, similar to that which issued through the opening made by the trocar. The quantity of fluid discharged was measured by my friend Dr. Charles Maguire, and found to exceed twenty-three gallons.

After unloading the cyst, we proceeded to dissect it from the peritoneum, diaphragm, and abdominal viscera. On tracing it towards the bladder, we found a communication between that organ and the cyst. A similar communication existed between the cyst and the inferior portion of the colon. On inquiry, we ascertained that the individual had not, for three weeks previous to her death, voided either urine or feces. The sac itself was found attached by a narrow neck, to the side of the uterus, in the natural situation of the ovaria, but that body had entirely disappeared. Owing to its numerous perforations, the cyst could not be inflated. After it became dry, it was distended with hay, which accounts for its contracted condition, and imperfect preservation.*

* Through the politeness of Dr. Hintze, this enormous cyst is now in our possession. It is nearly spherical in shape, and its walls, which possess considerable thickness, are of a compact fibrous structure.—Editor.

Case II. *A large Ovarian Tumor terminating in suppuration.* By the Editor.—In August, 1826, I was requested by my friend, Professor Frost, to examine the body of a black woman, who had died under his care, of an enormous enlargement of the abdomen of long standing. In the external configuration of the body, most that was remarkable was, the enormous enlargement of abdomen, which was indeed so great as to force the ribs and diaphragm upwards, and encroach considerably upon the cavity of the thorax. This enlargement, when viewed superficially, seemed to be uniform, being equally developed on both sides of the abdomen. But when examined by the touch, through the abdominal walls, some slight inequalities could be distinguished.

When the abdomen was laid open, it was found occupied by a large round tumor, which had forced all the intestines upwards, so as to make them encroach upon the diaphragm. This tumor was found, on a more careful examination, to have its origin in the left ovary, the natural aspect and configuration of which was completely lost in the diseased mass. It was round externally, presenting occasional elevations and depressions of small extent, and adhered with the intestines at several points. Its consistence was firm, except at its upper point, where a distinct fluctuation was perceptible. On opening it at this point, about a quart of offensive purulent matter flowed out. The structure of the indurated portion was somewhat lobulated, and varied much in its consistence, in different portions of the mass.

Remarks.—This case is important in several respects. In the first place, although the disease was of long standing and of gradual development, the diagnosis was obscure. Indeed, no positive conclusion could be formed previously to the death of the patient. Of several physicians who had seen the case, some supposed it to be dropsy of the ovary; others disease of the uterus, while some were of opinion, that the tumor consisted in a chronic enlargement and induration of the omentum. It probably had its origin in an obscure and protracted inflammation of the ovary, which after having attained the enormous size presented by the tumor, had already commenced a disorganizing process, which was taking place by suppuration. From this cause, therefore, such a degree of irritation and hectic fever was developed, as to exhaust the energies of the patient, and finally lead to a fatal termination.

It is manifest, when the volume of the tumor, and its intimate

connections and adhesions, with the surrounding parts are considered, that no means of relief could be afforded, and that an attempt to extirpate it, must necessarily have eventuated in the destruction of the individual.

Case III. *Ovarian Tumor, in which was found a fragment of bone surmounted by five molar teeth.* By J. W. Greetham, M. D. of Baltimore, *with references and remarks by the Editor.*

On the 7th day of August, I was called to see Maria ***, a colored woman, in one of her usual attacks of constipation, which was accompanied by a severe pain of the bowels, resembling cramp colic, with much vomiting of a muco-purulent substance. She was relieved in two days, so as again to attend to her domestic duties. On the 13th I was again desired to see her. The pains had returned, and what was unusual, there was great prostration of strength. Every means resorted to for her relief proved ineffectual. Before proceeding further with the case, I shall give a brief statement of her health for the last ten years, previous to which I have heard nothing which would induce me to suppose she was affected in any way. About the year 1824, whilst whitewashing the ceiling of her house, she fell upon one of the spokes of the back of a chair, which entered her vagina, and tearing its way through the left side, continued some way into the cavity of the abdomen. She was at the time attended by Dr. Donaldson, and so far recovered, as to be, in less than two years after, the mother of twins. She had previously borne three children. From the time of this accident, however, there was an appearance of disease in the region of the left ovary, which afterwards proved to be a dropsy of that organ. The tumor continued gradually to increase, until the year 1831, when I first saw her. She had, for some time previous to this, been subject to the constipation and pain mentioned in the first part of this report, which were always relieved in a few days, by the usual means. About a year after this, she was seen by Drs. Steuart and Baker, who advised the operation of paracentesis, but the woman would not submit. Her general health continued good, with the exception of these attacks, which occurred four or five times a year, until this time, when she was seen by Drs. Smith and Steuart with me. We again advised tapping, which she positively refused, saying she would rather die. She died on the 22d, about 2 o'clock, P. M. At 8 the next morning, in the presence of several physicians, I open-

ed the body. We found a tumor firmly adhering to the walls of the abdomen, and less firmly to the peritoneum covering the intestines, containing by measurement forty-five half pints of fluid. There was scarce a vestige of the omentum left, or it might have been that it was originally very small. From the resemblance of the fluid contained in the tumor, to that which had been vomited, we were of opinion there must be some communication, but after an accurate investigation, this was found not to be the case. The tumor extended from the pubis to the diaphragm When we raised the uterus, it was found in a perfectly healthy state. The right ovary, and indeed all the right appendages were also healthy. On the left, the ovary was entirely gone, and only about an inch and a half of the fallopian tube left, attach-

Upper figure, front view of the bone, with the teeth disposed upon its surface. Lower figure, back view of the same.

ed to the uterus. On examining the interior of the sack, we found embedded in its substance, a bone, which upon a first view, before it was cleaned, we all pronounced to be the temporal; however, after taking it home and cleaning it, I discovered three molar teeth, perfectly formed, and covered with enemal, and the rudiment of a fourth. A sketch of the bone and teeth is subjoined.

It is not my intention to enter into a discussion relative to the nature and cause of this disease, but I cannot refrain from a few remarks. Was the disease caused by the injury received ten years ago, or was it an extra uterine fœtus? If by the injury, from whence the bone? If an ovarian conception, what became of its other parts? I am inclined to the former opinion, for we know that in ovarian tumors, such substances frequently are found, and not only in adults, where a misconception might be suspected, but even in children, where this could not be the case. Nor are they confined to ovarian diseases, or even to women; for there have been more than one well authenticated instance of portions of bone, hair, &c. bearing some resemblance to a fœtus, found in male subjects. I incline to this opinion, because I really do not believe that the other bones could ever have been absorbed. Nor do I know of any one well authenticated case, to prove that such substances can be absorbed.

Remarks.—This case, though highly interesting, is not without numerous parallels. The records of science contain many instances, in which the ovaria have been found containing not only bones and teeth, but likewise hair, and other productions of an anomalous character. Nor is the accidental development of these products confined to the ovaria. Teeth and bones, as well as hair, have been found in other parts of the body, and in some cases, in an advanced state of formation. It may not be amiss to refer to a few such examples, which are within our immediate reach.

Ruysch reports the case of a man, in whom he found a tumor of the stomach, containing hairs and molar teeth.* The case of a young female, aged 17, is reported,† who at that age, became affected with a tumor in the region of the spleen, which gradually increased in size, and when she attained her twenty-first year, it was so large, that her body measured four ells in cir-

* Advers. Anat. Dec. iii. tom. ii. † Breslauer Sammlung, 1722, p. 76.

cumference, and the abdominal tumor nearly reached the knees. When she attained her thirty-eighth year, she expired, and on examination of her body, besides a considerable quantity of water, the left ovary was found converted into a large cyst, which, with its contents, weighed about fifty-four pounds. The substance of the tumor was thick, fatty, and of a meliceric consistence. It contained a considerable quantity of hair, some of which was short, while a part consisted of locks of an inch in thickness, which were fine and flaxen, and two feet in length. The inner surface of the sac also, had short hair growing from it. Interspersed throughout the tumor, there were several fragments of bone of irregular configuration. They were eight in number, one of which was seven, another eight, inches long; several of them were at least two inches broad. Four of these fragments were surmounted by sixteen teeth, presenting the characters of the incisores, canine, and molares. One fragment, of a triangular configuration, contained six molar teeth, and one incisor. None of the bones presented an accurate representation of any of the natural bones of the body, yet in the compactsnes, and the size and perfect development of the teeth, they resembled the condition of these parts in an individual of at least twenty years old.

Schützenkranz* found, in the diseased ovary of a girl of fifteen years old, some long hairs, a fragment of bone which resembled the upper jaw, and several teeth; and Bicker† has described a diseased ovary, which contained hair, bones, and teeth. In a case observed by Barnes,‡ a tooth was found in the orbit of the eye; and Schill found, in a man fifty years old, in a cyst situated beneath the tongue, but not pertaining to the jaw, three fully formed teeth.§ A case is also reported‖ in which, in a fatty tumor adhering to the diaphragm, twenty-one fragments of bone, four teeth, and a bunch of hair were discovered. A woman, who, after having been married about nine years, experienced an interruption of her menstrual discharge, and became affected with a tumor about the umbilical region, which

* Merwärdige Handel fer en den praktiska Forlossnings. Stockh. 1785.
† Waarneming van een vogenschyn lyk bevrugt eyernest, Rotterd. 1794.
‡ Medico-Chirurgical Transactions, vol. iv. p. 316.
§ Meckel's Archives für Physiologie, Bde. i. p. 538.
‖ Berlin. Samml. Bde. iii. p. 264.

finally ulcerated, and threw out a fleshy mass, containing an incisor tooth. She died five years after this event, and Scortigagna, on examining the body, found a large sac within the abdomen, adhering intimately with all the neighbouring viscera. It communicated externally, and contained, besides portions of an encephaloid and fatty character, several irregular fragments of bone, one of which resembled somewhat a maxillary bone, a quantity of hair, and a number of teeth of different characters.* Cheston describes a large tumor on the right ovary, which contained two quarts of fluid, a considerable quantity of dark colored hair, some fragments of cartilage, and one canine tooth.† In a similar ovarian tumor, Murray found its walls partially cartilaginous, and besides several other substances within, a considerable quantity of hair without roots, some of which was half an ell in length, and an irregular piece of bone, in which were distinct alveola, and several teeth, presenting the characters of canine, incisor, and molar teeth, which were as large as those of a child.‡ Cleghorn§ found in an ovarian tumor, hair, irregular pieces of bone, eight incisor, three canine, and sixteen molar teeth; and a case was observed by Gooch,‖ in which, in the centre of the tumor, there was a fatty mass, containing a considerable quantity of hair, some of which was a foot in length, and two teeth. Sœmmering¶ found, in a tumor of this kind, a fatty mass, in which were lodged teeth covered with enamel; and Dumas** observed a case, in which a fleshy mass, which occupied an ovarian tumor, contained teeth, one of which seemed to be deeply embedded in the diseased mass. In a case described by Baillie,†† the inner surface of an ovarian cyst had a considerable quantity of hair growing from it, and several teeth implanted upon its substance.

Besides these examples, the following authors are referred to as having described others of a similar character: Tyson, Needham, Sampson, Nicholls, Orteschi, Cocchi, Mosti, Ballard, Nys-

* Memoria della Societa Italiana di Verona, tom. xiv. p. ii. p. 305.
† Path. Untersuch. und Beobacht. Kap. iv. p. 58.
‡ Progr. ad actum Inauguralem, &c. Upsal, 1780.
§ Medical Commentaries, 1790, p. 100.
‖ Medical and Chirurgical Observations of Lond. 1772.
¶ Aussatzen su Baillie, p. 231.
** Fourcroy Medécine Eclairée, tom. ii.
†† Morbid Anatomy.

ten, Blumenbach, Laflize, Riche, Mery, Ploucquet and Autenreith, Grambs, Corvinus, Mederer, Young, Baudelocque, Merriman, Anderson, Milman and Coley.*

Many other cases exist on record, but it will not be necessary to refer to them. One reported by Dr. Gordon,† however, deserves to be noticed. In the thorax of a woman, a tumor was observed, which, during the life of the individual, protruded the walls of that cavity so as to resemble an aneurism. It occupied the interior mediastinum, and adhered intimately to the sternum. Besides a sebacious kind of matter, and some hair, it contained a portion of bone, which resembled somewhat a portion of the superior maxillary. Upon this latter, there was a kind of alveolar border, along which were ranged several teeth. The total number of teeth was seven, of which there were two incisors, two canine, and three molars. Other cases exist on record, in which hair, and fragments of bone of a similar kind have been found in the testicle; and Dupytren has reported an instance, in which the rudiments of a fœtus were found in the mesentery of a boy. But we cannot extend these citations further; nor is it necessary that we should do so, enough having already been said to shew, that such developments are not unusual, not only in the ovaria, but in other parts of the body, and altogether unconnected with the genital organs.

A more important consideration is, to determine the origin of the anomalous productions. This subject has been very ably discussed by Meckel,‡ who has arranged the sentiments which have been generally entertained, in reference to the bones and teeth accidentally developed, under two heads: 1. Those who maintain that they are supernumerary parts, formed by the same act of fecundation, by which is produced the individual in which they are found: 2. That they are produced in an organization already developed.

It has been urged against the first of these hypothesis, that if these anomalous bones and teeth were supernumerary parts of the same conception, there is no reason why they should take place more frequently in the ovaria, and the organs of generation, than in other parts of the organization. Yet such is in-

* J. F. Meckel Ueber regelwidrige Haar und Zahnbildungen, Archives für Physiologie, Bde. i. p. 519, Halle, 1815.

† Medico-Chirurgical Transactions, vol. xiii.

‡ Archives für Physiologie, Bde. i. 1815.

contestibly the fact; for although there have been cases reported, in which these accidental products have been found in other parts of the body, they are too few in number to constitute an exception to the general rule. Another argument of equal force may be deduced from the fact, that in all but a very few instances, these bones and teeth have been found in the female sex. Yet if they were produced in the manner represented, there is no reason why they should not occur, with equal frequency, in the male. While, therefore, the fact is incontestible, that some of the rudiments of a fœtus may be generated by the same act of fecundation, which produces a perfect and well formed individual, and be included within the latter, as in that form of *monstrosity* by *diplogenisis*, which has been described under the appellation of *monstrosity* by *inclusion*, as in the cases described by Dupuytren and others, there are no reasons to justify the conclusion, that these rudimentary bones and teeth are produced in this manner.

The second hypothesis has been variously modified. By some, the origin of these adventitious developments has been referred to an extra-uterine conception; and they have consequently been regarded merely as the debris of a fœtus. This opinion, however, cannot be maintained. It is completely controverted by the facts, that no other part of a fœtus are ever found, under such circumstances, than irregular fragments of bone, hair and teeth; that the number of the latter, (there being in some instances more than a hundred) is too great to belong to one, or even two, or three fœtuses; that the bones have no satisfactory resemblance to any of the natural bones; that they are too irregular to owe this character to the influence of any cause operating the destruction of a product of conception; and finally, that there are no facts to prove, that the other bones of a child can be thus effectually destroyed, while the jaws escape, but many to demonstrate, that such is not the case, since those of extra-uterine fœtuses, proper, have been known to be carried upwards of fifty years, without undergoing any such change.

Another modification of this opinion, is that which refers them to an extra-uterine conception, but one which is incomplete, and only capable of forming some of the rudiments of a fœtus. The principal arguments which have been adduced in support of this hypothesis are, the extreme youth, or old age, of the individuals, in which such productions occur, their

procreative powers being, in consequence of this, too feeble to develope a perfect fœtus, and the assertion made by some, that the development of these productions is attended with the symptoms of pregnancy, or takes place simultaneously with a perfect conception. These facts render it highly probable, that hairs, bones, and teeth, in many cases at least, have their origin in the manner alleged; yet there are others, which prove that they are not always produced in this way. Thus, in some of the cases, the individuals have been too young to have had connexion with a man; in others the condition of the organs has been such as to prove that no such connexion had taken place; and the fact, that these formations are sometimes found in the testicles, and other parts of the male, renders it impossible that this explanation can apply to all cases. In one of Baillie's cases, the individual was only twelve years old, and the hymen was perfect! The other, though old enough to indulge in sexual intercourse, could not have done so, as the hymen was entire, "the edge of the membrane being quite sound and natural, and the aperture in it remarkably small." The uterus, too, was preternaturally small, and contained no membrana decidua, which it almost always does in extra-uterine conceptions. The subject of Lanzweerde's case was only eleven years old; that of Nysten's twelve; and those of the examples reported by Schuetzer, and Stalpart Vander Wiel, fifteen. In all of them, the signs of virginity were strong; and in some, the symptoms denoting the existence of the anomalous development, had been present for some time. It has, moreover, been already remarked, that hair and teeth, are sometimes found in the testicle, and other parts of the male, where of course copulation could have had no agency in their production. Besides other cases which exist on record in proof of this fact, there is one reported by Wardrop, on the authority of Colman, which may be referred to. It occurred in a gelding, in which a cyst was found, a little under the right kidney, containing a fatty matter, hair, and some teeth.*

These considerations render it incontestible, that while these substances may be, in some cases, the product of an imperfect conception, they may be formed independently of the concurrence of the act of copulation in the individual containing them.

* Baillie's Morbid Anatomy, sixth edition, by Wardrop, p. 350, London, 1830.

It has hence been suggested by Meckel, that the preternatural excitation of the venereal organs, by masturbation, and other causes, may be alone sufficient to develope a kind of act in the ovaria, analogous to conception, the result of which is, the formation of these rudimentary productions, having an analogy with the elements of a fœtus. In favor of this opinion, he appeals to the case reported by Nysten, in which the clitoris was found preternaturally large,—a circumstance which he thinks proves, that the individual was addicted to the practice of masturbation. Hence he remarks, that although females affected with these productions, who are sufficiently advanced in life to be capable of indulging in the venereal act, present the physical signs of virginity, this is no evidence, that in a moral point of view, it has been held inviolate. The reason why such productions are generally found in the ovaria, he supposes to be owing to their greater productiveness, dependent upon the circumstance, that they are the organs in the female, whose province it is to produce the new being, and perpetuate the species. He supposes, with Verheyen, Blumenbach, and Roose, that the corporea lutea, which were formerly regarded as an evidence of a previous conception, may likewise be induced, by a preternatural excitement of the venereal organs by masturbation, and that the accidental development of hair, bones, and teeth, merely differs from the production of those bodies, in the greater activity of the forces employed, and the greater perfection of the products which are the result of their agency. Hence he conceives, that as this mode of stimulation may give rise to such results, females who are addicted to such habits, may incur a species of *Lucina sine concubitu.**

This explanation, though ingenious, is altogether hypothetical. Nor, if well founded, does it explain the development of these formations in the male, or in parts of the female remote from the ovaria and the genital organs. While, therefore, a blighted extra-uterine conception may explain some of the cases, there are others, the production of which can only be accounted for upon those laws of the organization, which direct the development of monstrosities by *diplogenisis.* A double conception takes place, in consequence of a fruitful union of the sexes; but from some cause, the regular evolution of one

* Archives für Physiologie, Bde. i. p. 581.

ovum is interrupted, while the other progresses, so that the blighted ovum merely has some of its rudiments formed, which become included in the healthy one, and thus we have constituted what is denominated *diplogenisis* by *inclusion*.

From these considerations, it is apparent that in all cases, these productions must be referred to a conception; but, that they may either originate in an extra-uterine conception taking place in the individual in whom they occur, or in a conception which gives rise directly, and at the same time, to the adventitious formations, and to the perfectly developed organization in which they are included. The first will explain the formation of cysts containing hair, nails, bones, and teeth, found in the ovaria of females who have indulged in sexual intercourse;—the second those which are met with in the ovaria, and other parts of the body of females, who from youth or other causes, have not participated in the venereal act, as well as those which are found in the male.

ART. IV. *Note on Dysentery, and the employment of Nux Vomica and its preparations in the treatment of that disease.* By the EDITOR.

WE have repeatedly, in the course of our practice, met with cases of dysentery, during the autumnal months, which we have found exceedingly unmanageable. We have been particularly embarrassed and disappointed in the management of this form of disease, during the last and the present autumn, in the Baltimore Infirmary. We are sensible, that part of our difficulties have originated from the advanced stage of the disease at which many of the individuals have been received, and the irregular habits of many of the subjects whom we have been called upon to treat. But besides such cases, there have been others, to which the same remark will not apply. Many individuals have come in, laboring under the common intestinal fever of the season, complicated with dysenteric symptoms, in whom, after the fever was removed, the affection of the large bowels continued, and could not be readily controlled by the ordinary remedies. In some, these symptoms did not make their appearance until subsequent to the subsidence of the

febrile affection, and were only developed during convalescence, by some imprudence in diet, or other causes.

The cases of the disease which were admitted after several days illness, were generally of a very exasperated character, and were doubtless rendered more so, independently of other circumstances, by the imprudence of the individuals themselves, either in diet, or the domestic remedies employed for their relief. It is very common with the more ignorant part of the community, when attacked with dysentery, to disregard the early symptoms of the disease, and to continue to indulge in crude and indigestible articles of food. Many of them, indeed, finding sometimes a momentary mitigation of the griping and tenesmus, from the use of spiced alcoholic draughts, are in the practice of resorting to them, as a common domestic prescription; and the consequence is, an increase of the inflammation of the mucous membrane of the intestines, and a general exasperation of all the symptoms of the malady. Many of the individuals who have fallen under our care, have been submitted to this species of discipline, and have only ceased to rely upon their own favorite prescriptions, when the disease has reached the ulcerated point, and the whole of the vital forces have become completely prostrated. Several such have been admitted, with the abdomen tender and tumefied, or contracted and drawn inwards towards the spine; the pulse hurried, feeble, and small; the tongue black or brown, and perfectly dry and scabrous; the countenance collapsed, decomposed, dark colored, ghastly, and cadaverous; the eyes sunken and lustreless; the whole body emaciated and exhaling an intolerable fœtor, and stinking mucous, or sanious, flocculent stools draining away involuntary in bed. In some of these cases, the nervous system has been considerably affected, as manifested by low delirium or coma, and muscular twitchings. Few, in which the disease had reached this degree of intensity, have recovered, and dissections have clearly shewn, that such an event could not be anticipated, under any variety of treatment. The mucous membrane of the cæcum, colon, and rectum, in fatal cases, has been found crowded with extensive ulcerations, from one extremity to the other; the intermediate portions thickened and covered with a firm tenacious albuminous deposite, in some instances perfectly black, and so adherent, as to be with great difficulty detached from the membrane. This black color of

these adventitious deposites, we have found to be of frequent occurrence in what is called typhoid dysentery; and we doubt not, it is the condition which has been described by many writers, as gangrene of the intestines. In some instances, the ulcers have perforated entirely through the walls of the intestine; and in others, they were rendered so fragile, as to tear under the slight force of handling them.

There were, as previously remarked, other cases of a milder form,—attended with more or less fever, frequent inclinations to stool, great griping and tenesmus, and the discharge of mucus mixed with blood, and occasionally with more or less feculent matter. These cases were generally attended with a sense of weight in the region of the abdomen, tenderness on pressure, especially in the course of the colon, and sometimes with a red contracted tongue, but frequently with one more expanded, and furred upon the surface. Sometimes the dejections, instead of consisting of mucus, assumed a more watery and flocculent character,and were highly offensive, particularly when the disease had continued for some time. But whatever were the modifications assumed by the disease, it was generally difficult to control, and when apparently arrested in its progress, it manifested a strong tendency to recur after the lapse of a few days.

The treatment was very much varied, as the cases themselves presented great diversity of aspect. Acting upon the principles suggested by the pathological state, the greatest reliance was placed upon local blood-letting, by means of cups applied to the abdomen, revulsion excited by blisters, occasional aperient doses of castor oil, demulcent drinks and emollient injections, and anodynes administered as well by the mouth, as by injection and suppository. The anodyne generally consisted of some of the forms of opium, either given alone, or in form of Dover's powder, combined with small doses of calomel or blue pill. In many cases, this course of treatment afforded relief, but in some it entirely failed, and in several where the remedies were found beneficial, the good effect was only temporary.

Emetics were employed in a few cases, but without any very marked benefit. Scruple doses of calomel, alone or combined with opium, so popular in the treatment of this disease, had a full and fair trial, but with the exception of a few cases, and

those of a recent character, they not only failed, but sometimes increased the mischief. In some of the worst cases, however, opium in any form was decidedly injurious, and tended manifestly to increase the internal congestions and the dryness of the tongue, and exasperate the nervous symptoms.

Foiled of success, and discouraged by the general result of all these remedies, we have been induced, within a short time, to make trial of the nux vomica, in some cases of this disease. We have as yet only had an opportunity of using it in a few instances, and those not of the worst character, yet so difficult to manage, that some of them had previously resisted all our remedies. The cases selected, were those which were not attended with much febrile excitement, but which were characterized by frequent calls to stool, considerable griping and bearing down, and an inability to pass any thing but mucus, or that material streaked with blood. In some of the cases, the remedy, though certainly beneficial, was not competent alone to accomplish a cure; in others its good effects were so striking, as to inspire considerable confidence in its virtues, and to induce us to make this notice, with the view of inciting others to give it a fair trial under similar circumstances. We do not wish to recommend it to the exclusion of other means, or to inspire a hope that it will be found capable of itself of curing the disease in a large number of cases. But from what we have seen of its effects, we feel assured, that it will be found a useful adjuvant, and that in some cases at least, it will afford relief, when other remedies fail.

We commenced at first by administering the nux vomica in powder, in doses of seven grains, three times a day, as recommended by Vaux of Ipswich, England. In one individual to whom the article was administered in this form, the good effects were prompt. The griping, tenesmus, and frequent calls to stool were speedily checked; the discharges became natural, and the patient, who had suffered much, and had failed to obtain relief from the treatment previously prescribed, expressed himself delighted with the remedy. It was also beneficial in other cases, as were the alcoholic extract of Pelletier, administered in doses of two grains, three times a day, and the strychnia, given in form of an acetate, in doses of one twelfth to one sixth of a grain, formed by dissolving the strychnia in acetic acid. Our comparative trials of the different preparations of the article have

as yet been too limited, to enable us to decide which deserves the preference; but we are inclined to prefer the powder, and next to that the extract. It will perhaps be beneficial to combine with whatever form is employed, a small quantity of opium, or some of its preparations.

The good effects of nux vomica in several of the affections of the mucous membrane of the digestive organs, have long been known, but it is highly probable, that the remedy has not been as generally employed as it deserves. Hagström, a Swedish physician, was, we believe, the first who recommended it in dysentery, and his testimony in its favor was of the most flattering character. The celebrated Hufeland* states, that he derived great benefit from it in the treatment of epidemic dysentery; and Thomann† remarks, that he has seen it effectual in allaying the tormina, and abating the inclination to go to stool. Richter‡ observes, in reference to the efficacy of this remedy in dysentery, that the extract, like opium, tends directly to allay the irritation of the alimentary canal, and subjoins, that combined with the article just mentioned, it proves beneficial where opium alone fails to do so. The following is the form in which he administers it:

℞	Extract. Nucis Vomic.	℈ ss.
	Mucillag. Gum. Mimos.	ʒ i.
	Aqua Font.	ʒ vi.
	Syrup. Althæ,	ʒ i.

M. S. Two tables-poonsful every two hours.

By Most,§ a recent writer, this article is especially recommended in what he denominates *pituitous dysentery*, and he remarks, that when the disease is protracted, the article may be administered in the following form for several days in succession, with great advantage:

℞	Nuc. Vomic.	3 i.
	Infunde in aqua ferv.	qs.
	Digere per ½ hor. ut reman.	ʒ vi.
	Col. adde Tinct. Opii Simp.	3 ss.

M. S. A table-spoonful every two hours.

We find the following very flattering account of the efficacy

* Journal der Praktisch. Heilkunde. Bde. i. stucke 1.

† Summa. Observat. Med. tom. iii.

‡ Die Specielle Therapie. p. 133, Bde. ii. Berlin, 1821.

§ Encyklopädie der gesammten medicinischen und chirurgischen Praxis. Thiel ii. p. 317. Leipzig, 1833.

of nux vomica in dysentery, in Armstrong's lectures,* recently published. "A friend of mine, Mr. George Vaux, of Ipswich, has tried a remedy for sixteen years, in about two hundred cases, (*i. e. in dysentery*,) and the result has been so successful, and so remarkably uniform, that I feel it my duty to mention the treatment here. This gentleman gives in dysentery, or inflammation of the mucous membrane about the colon, seven grains of nux vomica thrice daily. It neither purges or constipates, but removes the inflammation, and healthy evacuations follow. Mr. Vaux, who resides in London, bears similar testimony to the value of the remedy, and I strongly recommend it to your notice. I shall certainly try it in the next case I meet with. It seems to operate as a sort of specific."

By Frisch, a German physician of celebrity, the remedy is highly recommended. He remarks, that in those forms of diarrhœa, dependent upon a subacute inflammation of the mucous membrane of the intestines, which are attended with frequent discharges of tenacious mucus, and much griping and tenesmus, no remedy is so effectual as nux vomica.† Its efficacy in diarrhœa has also been testified by others. In a case of chronic diarrhœa, in an individual of a nervous temperament, professor Récamier administered the alcoholic extract of nux vomica, in doses of one eighth of a grain, with complete success, after various remedies had been resorted to ineffectually.‡

From these remarks it will be seen, that the remedy is at least deserving further trials. To expect it to perform the part of a specific would be an absurdity, nor would it be reasonable to expect much from it in the acute stage of dysentery. But after suitable depletion, and especially, when the disease is verging upon a chronic form, we doubt not it will be found useful. Our own experience with it, as yet, has been limited; but we propose to give it a fair trial, and in the mean time, as truth is our only object, we shall be glad if these observations should serve to induce some of our professional brethren to test its efficacy. Should any of them do so, we should be pleased to receive the results of their experience.

* Lectures on the Morbid Anatomy, nature and treatment of acute and chronic diseases, &c. By the late John Armstrong, M.D. &c. Edited by Joseph Rix, M.D. p. 409. Lond. 1834.

† Thompson's Materia Medica and Therapeutics, vol. 1.

‡ Richard, Elemens d'Histoire Naturelle Medicale. tome ii. p. 148.

SELECTED PAPERS.

A Lecture by WM. STOKES, M.D. *delivered at the Medical School, Park street, Dublin.—Session* 1833–4.

PAINTERS' COLIC.

(Concluded from page 54.)

IN the third case, the patient had fits of an epileptic character, in one of which he expired. The colon exhibited a slight degree of redness, but quite insufficient to explain the symptoms during life. In the fourth, the cause of death was the same, and, on dissection the tube was found healthy. Another patient, after recovering from the symptoms of painters' colic, got a sudden attack of asphyxia and died. His body was examined, but there was no trace of disease in the colon or any other part of the intestinal canal. Here we have five cases in which there was either no disease at all in the digestive tube, or, if there was any, the amount was quite insufficient to account for the symptoms. Louis, in a memoir which he has published, on sudden and unexpected deaths, gives a case of this disease where death occurred suddenly on the eighth day. The intestines were found to be in a healthy condition. Martinet gives two cases of persons who died of the cerebral symptoms while laboring under this disease; here, also, the tube was in the normal state. Thus we have eight cases, with dissections, detailed by various authors, all men of high professional celebrity, having no theory to support, and all agreeing in the statement, that there is little or no appreciable lesion of the digestive tube; that in the majority of cases it is in a state of health; that no contraction exists; and that such morbid appearances as have been found must be looked on as accidental.

There is one interesting circumstance in these cases which deserves to be noticed. With the exception of the first and fifth cases, all the patients presented that form of the disease in which the functions of the brain are decidedly injured. Here it seems probable that the cause of death was excessive irritation of the nervous system. Now, in the observations I made on the cases, which were treated at the Meath Hospital, you will recollect, I stated, that where the cerebral symptoms were predominant, the abdominal were more or less indistinct and latent, and that the cause of indistinctness, or even total absence, of these might be owing to the force of the disease being thrown upon the brain and

spinal cord. Such was the case in the instances above recited, and such we have also seen to be the result in the case of those animals of an inferior order, that have been exposed to the poison of lead. How far the predominance of cerebral excitement may explain the want of appearances of disease in the digestive tube may be a subject of consideration.

What is the state of science with respect to the brain and spinal marrow? Allow me here to call to your recollection the symptoms of functional derangement of the nervous centres, the coma, the violent convulsions, the amaurosis, the deafness, the delirium, the paralysis. All these are violent symptoms, and you would naturally expect to find them connected with some sensible alteration, some congestion, or inflammation, or ramollissement. But nothing of this kind can be discovered. In all the cases, where death occurred under such circumstances, at La Charité, with the exception of some slight appearances of cerebral lesion in the second, there was no perceptible disease in the brain or spinal cord. The membranes and substance of the brain presented their normal condition; there was little or no fluid in the ventricles; the spinal cord was healthy and natural in consistence and color, and there was no effusion into its sheath. All these circumstances led to the conclusion that painters' colic is essentially a neurosis. Observe, too, how interesting it is to connect the circumstance of the absence of organic change, with the singular fact which I mentioned in my last lecture, that the comatose symptoms of this affection may be treated with stimulants and opiates. Where we have coma with congestion of the brain, opium has the effect of increasing the symptoms; here it was found to have a contrary effect. So that our experience and the results of pathological anatomy, as far as they go, appear to square exactly. We see, then, that painters' colic is not inflammation of the intestines, or of the brain, or of the spinal cord, and this information, though of a negative character, possesses considerable value in a practical point of view. I do not know any case of what have been termed neuroses, in which the bearings of pathological research on practice are so extensive and so satisfactory.

It is a fortunate circumstance that this disease is seldom fatal, and it is some consolation to think that, although the patient's sufferings are dreadful and often protracted, there is little danger of life, and that the complaint is almost always amenable to judicious treatment. I have been for some years in the habit of treating it in a routine way, and can speak from experience of its success,—of course this treatment is to be modified by circumstances. Suppose a patient applies to you with violent pain about the navel, a hard and retracted state of the abdomen, obstinate costiveness, and the other symptoms which characterize an attack of painters' colic; the first thing I would advise you to do is to prescribe a full opiate. Many persons would object to this, and say that there is constipation enough already, and that opening the bowels would be much

more likely to give relief. But opium does not here add to the constipation; indeed, so far from doing this, it sometimes acts as a laxative. At all events, it is a remedy which is perfectly unobjectionable. Give, then, in the first place, a full opiate, it will have the effect of relieving the patient's sufferings, and will enable you to gain time for the employment of other means. The next thing is to place the patient in a hip-bath, and keep him in it as long as possible. Do not neglect this, for I know of nothing that gives more decided relief. I have often seen cases where the patient was quite easy while he remained in the bath, but experienced a return of the pain as soon as he left it. If you have no means of procuring a bath in this way; the next best thing is to have recourse to emollient stupes containing some narcotic, after the manner first introduced by my colleague, Dr. Graves. One of the best of this kind, is the tobacco stupe, if you cannot get this you may employ poppy heads for the same purpose. The tobacco stupe is much better than the tobacco injection, because its effect can be more easily regulated, but in violent cases I am in the habit of combining both, employing the stupe during the paroxysms of pain, and throwing up a tobacco enema every four or six hours, until a decided impression has been made on the symptoms. In the success which has attended my distinguished friend Dr. O'Beirne's treatment of tetanus by the use of tobacco, we see an analogous effect. In this way you will succeed in giving relief; you should also prescribe a brisk cathartic, and this you may do without any fear of injuring the patient, or exciting intestinal inflammation. The insensibility of the intestines to the stimulus of even powerful purgatives is a curious feature in this disease, and bears strongly against the idea of its being connected with any inflammatory condition of the tube. In the Hospital La Charité, the treatment is routine; it consists of an emeto-purgative plan, which is continued day after day until the symptoms yield. The purgative we employ in the Meath Hospital, is croton oil combined with castor oil and mucilage, or given in the form of pill. When the bowels have been freely acted on, the case generally goes on well. After the bowels have been opened, we continue the employment of the hip-bath, the narcotic stupes, and anodyne injections, taking care at the same time to persevere in the use of purgatives.

Andral makes a good remark on this point. "Here," says he, "are cases in which, from some peculiar alteration in the state of innervation, the mucous surface of the bowels is rendered less sensible than in its ordinary condition, and can bear freely the stimulus of powerful purgatives. May not this condition also occur in other states of the economy? We are, therefore, led to conclude that purgatives are not, in all cases direct stimulants."

Painters' colic has been treated in Paris by bleeding and leeching, but this has not been found so successful as the ordinary purgative plan. I

have never seen a case in which general bleeding seemed to be called for except one, and this was a most violent case which had resisted the ordinary means of treatment for forty-eight hours. I recommended bleeding from its well known anti-spasmodic power; a quantity of blood was taken, and soon after the purgatives began to act, and the patient got relief. With respect to leeches, I have employed them only in those cases which are accompanied with symptoms of fever and gastric irritation; where there is quick pulse, hot skin, foul tongue, thirst, vomiting, and epigastric tenderness. In such cases I have applied leeches, but my experience of them is, that the relief afforded is by no means so great, or so decided, as in cases of intestinal inflammation, and it is a mode of treatment which I do not by any means rely upon for removing the disease.

After the violent symptoms have been subdued, the next thing you have to consider is, whether there is any paralytic affection, and how this is to be treated. If the disease be severe, or of considerable duration, you may look for paralysis of one or both of the upper extremities with a good deal of certainty. This part of the subject, I believe, more properly belongs to the consideration of nervous affections, but, as I have gone so far into the treatment of painters' colic, I may as well give the whole together. The paralysis which follows this disease is different from that which is the result of apoplexy; it is a neurosis of the passive kind, and to be treated as such. The patient, sometime after the occurrence of the usual symptoms of colic from lead, begins to complain of weakness in his arm; he feels some difficulty in extending his fingers or raising his hand to his head, and then the symptoms become more marked. The arm and fore-arm become rapidly atrophied; the paralysis principally affects the extensors, while the flexors retain a considerable share of power; the fingers are bent, and the arm hangs by the side. Here the first thing you should do is to adopt the treatment recommended by Dr. Pemberton in his work on Abdominal Diseases, namely, to apply a splint to the inside of the fore-arm and hand, so as to counteract the preponderating influence of the flexors. Apply a splint to the fore-arm, wrap it up in flannel, and make the patient keep it supported by a sling. In this way you establish a kind of balance between the antagonist muscles, and place the extensors under favorable circumstances for bringing about a cure. If the patient has both arms affected, which is sometimes the case, change the splint from one arm to the other every second day, and continue this alternation until the cure is completed.

You will next have recourse to the use of strychnine, one of the best remedies we possess in cases where the paralysis does not depend upon organic disease of the brain. This is a remedy which is given with good effects, even in cases of paralysis from apoplexy, *where there is*

reason to suppose that absorption of the clot has taken place. In a case of apoplexy, it can be employed only after some time and where depletive measures have been sedulously put in force, but in a paralysis of this description you may begin with it at once. Commence with the exhibition of one-twelfth of a grain of strychnine two or three times a day, and go on increasing the dose gradually, until a grain, or even a grain and a half is taken in the twenty-four hours. To ensure the exact division of this powerful drug, you should direct a grain of it to be dissolved in a few drops of alcohol, and then made into pills of an equal size with crumb of bread or conserve of roses. In this way you will succeed in bringing back the lost power of the muscles of the fore-arms, and restoring its nutritive functions. I may mention here, that the atrophy of the paralyzed limb, which occurs in this disease, cannot be accounted for by supposing that it is produced by want of exercise; the emaciation is so rapid (sometimes taking place in ten days or a fortnight) that we can only attribute it to some unknown lesion of innervation.

If the use of strychnine be followed by severe muscular twitches, pain in the head, or convulsions, you must omit it for some time, and then, when these effects have completely subsided, it may be resumed if necessary. You should also bear in mind, that this remedy is one of those medicines which have been termed accumulative; that is to say, a patient may be taking it for a considerable time without any perceptible symptom, and then its effects explode suddenly, the quantity which has been accumulating in the system manifesting itself at once by symptoms of great intensity. Here you omit it immediately, and with a view of relieving the existing symptoms, prescribe a draught, composed of camphor mixture, ammonia, and opium. This has generally the effect of calming the nervous excitement, and you will seldom have any more trouble on this account. *En passant*, I would advise you, whenever you employ strychnine in private practice, to inform your patient of the occurrence of such symptoms, and tell him that there is no cause for alarm. Instead of strychnine, some of the continental practitioners are in the habit of prescribing brucine, and it is stated with considerable advantage. I have tried it in two or three cases without much apparent benefit, and I am inclined to think that it is decidedly inferior to strychnine. In France, however, it has been very largely employed, and has the reputation of being a remedy of considerable value in the treatment of paralysis. It has one advantage at least over strychnine; it can be much more easily divided and regulated, so far as respects the quantity given, as it is a much weaker preparation than strychnine, one grain of which is equivalent to six grains of brucine.

In addition to these measures, I have seen much benefit result from the application of blisters and frictions, with stimulating liniments to the spine. It is also of importance to remove the clothes in which the pa-

tients have worked; they are frequently charged, saturated with lead, and have a considerable tendency to keep up the disease. I have so often seen an attack of painters' colic reappear shortly after leaving hospital, and without any evident exposure, that I could only attribute it to the circumstance of their garments being saturated with the lead.

In the foregoing plan of treatment there is nothing new; it is, in fact, a routine practice, but it is one which is borne out by the results of pathology, and which, from long experience, I can strongly recommend. I may also remind you that the plan of treatment followed in the Hospital La Charité, which has more cases of this disease than any similar institution in Paris, is completely routine.

Other metals besides lead, as, for instance, copper, produce effects somewhat analogous. Copper is said to produce salivation, colic, and vomiting. Brass-founders are liable to these symptoms, as also other persons employed in the manufacture of copper. I have not seen the disease, but it is said to be analogous to lead-poisoning, so far as colic is concerned; in other respects the symptoms differ. The convulsions are not so violent, nor is the paralysis nor coma so frequent; there is often considerable fever, thirst, difficulty of respiration, præcordial anxiety, diarrhœa, and prostration of strength, so that it comes much nearer to ordinary intestinal inflammation with fever, than painters' colic. Yet it is a curious fact, that, notwithstanding all this array of symptoms so closely bordering on inflammation, it has been found in Paris, where several cases of this disease have been seen, that it is amenable to the same treatment as painters' colic, and that, under the use of purgatives, the fever, thirst, diarrhœa, and tenesmus subside.

Mercury, under certain circumstances, will produce a most extraordinary affection, on which I shall here make a few observations. The disease is not of very frequent occurrence, but it is of importance in practice to be able to recognise and treat it properly. It is a proposition well known to almost every one, that many bad effects have resulted from the abuse of mercury: and I need not tell you how many persons are injured by the empirical employment of this potent drug on all occasions and in all constitutions. It is a common opinion that mercury acts principally on the capillary and absorbent systems, but there can be no doubt that it also acts upon the nerves, and that in a very remarkable manner. I have seen cases where the constant use of calomel has produced a marked derangement of the nervous system, manifested by great irritability, tremors, hysterical excitement, and hypochondriasis. You will see in the various works on toxicology, an account of the effects produced by mercury on persons employed in quicksilver mines, and on tradesmen, such as looking-glass manufacturers and others who come in contact with mercury. I shall read for you the notes of a remarkable case of this kind, which was some time back under treatment in the

Meath Hospital. It may be called a form of the paralysis agitans from the effects of mercury. Similar cases have been described.

A man, aged forty-six, was admitted into one of our medical wards in October, 1833.

He stated that, from the time he was eight years of age, he had been employed in a looking-glass manufactory, and that his occupation principally consisted in what is technically termed the silvering of mirrors. In this process the operator's right hand is repeatedly immersed in a vessel filled with mercury, while the left fixes a sheet of tin-foil, on which the metal is rubbed. Artisans while thus engaged are in the habit of using a muffle, which covers the mouth and nostrils. This the patient said he had never used, because he found that those who were in the habit of wearing it did not enjoy better health. For thirty years he continued to enjoy tolerable health, with the exception of some bleeding from the gums, with shooting pains and a sense of formication in various parts of the body, accompanied by a slight loss of power in the hands, which came on at various times, and was generally relieved by the use of ardent spirits. He had been frequently salivated, and when admitted had lost nearly all his teeth. The mode in which he lost them was this; gum-boils formed close to the roots of the teeth, which soon after dropped out, and in this way the local inflammation subsided. About three years ago, he had an attack similar to that for which he had been admitted; he went into the hospital and was put under an active antiphlogistic treatment with relief. From that time up to the period of his admission, he had enjoyed tolerable health, except that the sight of the right eye was considerably impaired, and that his memory was slightly affected. He forgot the names of persons and places, and was frequently at a loss in endeavoring to recollect the persons to whom he had lent his tools. On being brought into the hospital, he presented an extraordinary specimen of human suffering, and I was at first unable to give his complaint a name, the case being the first of the kind I had seen. It exhibited the phenomena of a violent spasmodic affection: it was different from tetanus, or hydrophobia, or hysteria, but it bore some faint analogy to chorea. The head, arms, and fingers, particularly on the left side, presented a succession of quick, convulsive, jerking motions. The angles of the mouth were retracted; the eyebrows twitching; the head constantly thrown back, but the agitation scarcely raised the arms. The nostrils were spasmodically dilated. The sterno-mastoid, trapezius, scaleni, diaphragm, and the abdominal muscles were similarly affected. Their contractions were short, rapid, and painful. From the constant hiccup with which the spasms of the diaphragm were attended, and the jerking motions of the tongue, his speech was interrupted and indistinct. He was occasionally free from spasms altogether, but whenever he transmitted volition to any part of the muscular system, it became instantly

affected. When he endeavored to raise his foot from the ground, it quivered and fell quite powerless and useless. Whenever he attempted to carry a vessel to his lips, he generally overshot the mark, carrying the vessel towards his ear, nose, or forehead, and spilling its contents over his face or neck, so that it was a common saying among the patients in the ward, that he did not know the way to his mouth. But if a vessel was applied to his lips by another person he could swallow easily. A sudden blast of cold air, the application of a cold hand to the skin, or the abrupt entrance of any person into the wards brought on an attack of spasms. The muscles of the left hand and of the left side were affected much more than those of the right. The mental powers were not impaired; the patient was intelligent and seemed anxious to communicate the particulars of his case. During the whole course of his disease he retained a full power over the urinary discharge and defecation. There was some slight tenderness on pressure over the fourth and fifth dorsal vertebræ, but the rest of the spine exhibited no increase of sensibility. His skin was cool and dry; his pulse quick, weak, and small; his bowels inclined to be costive, but easily moved by laxatives. Here we see a marked difference between this affection and painters' colic.

The treatment adopted in this case was very simple. Leeches were applied to the tender part of the spine; the patient was placed in a warm bath, and got some laxative medicine, followed by an opiate. He was also ordered to have a large flannel shirt, and to be placed in a warm comfortable bed. He passed the night tolerably well, and next day appeared to be much improved. I shall not continue the daily reports of this case, but shall merely mention, that after a few days a great improvement took place. The spasms of the left side continued, though much less severe. Those of the purely voluntary muscles on the right ceased, while the spasms continued in the respiratory muscles on this side. We found that all the muscles of the face which have been called respiratory by Sir C. Bell, the platysma, scaleni, pectoral, and intercostal muscles, and the diaphragm were thrown into violent spasms, while the purely voluntary muscles remained in a state of perfect quiescence. I am not aware that this circumstance has been observed in any other case. As far as it goes, it tends to corroborate the views of Sir C. Bell. In the treatment of this case we employed narcotic frictions, particularly those composed of the extract of belladonna, to the spine with considerable benefit. The patient was cured by very simple means, and at little expense to his constitution.

[*From the Lond. Med. and Sur. Jour. for April and May*, 1834.

REVIEWS.

Admonere voluimus, non mordere.——
Sunt bona; sunt quædam mediocria, sunt mala plura.

Das Quecksilber,—ein Pharmakologisch—Therapeutischer Versuch, von Dr. Ludwig Wilhelm Sachs, ordentlichen Professor der Praktischen Medizin an der Universität Königsberg, Director des Medizinischen Poliklinikums, u. s. w. p.p. viii. 368. Königsberg, 1834.

An Essay on the Pharmacological and Therapeutical Properties of Mercury. By Ludwig Wilhelm Sachs, M.D. Professor of Practical Medicine in the University of Konigsberg, &c.

We have here a monagraph on a most interesting subject. To the practical physician, mercury in its various forms, is an invaluable agent, and like antimony, opium, and Peruvian bark, may be truly regarded as one of the most important means we possess, when properly directed, of mitigating human suffering. Still, with all that can be said in its favor, it may become a source of irreparable mischief. Possessed of powers which are exceedingly active; admitting perhaps of a wider range of application than any other single remedy, and being at the same time more diffused and permanent in its effects than most of our remedial measures, no one of them requires in its administration so much judgment and discrimination,—so intimate a knowledge of the properties and powers of the preparation employed, and of the condition of the organization, and so clear and accurate a conception of the indications to be fulfilled. To resort to the employment of an agent endowed with such powers, with no better guide than a blind empiricism, amounts to criminality, and he who contents himself with pursuing such a homicidal routine, wantonly jeopards human life, and abuses one of the most precious resources of the art. That there are such, we apprehend there are too many facts to justify a doubt, and accordingly, while the value of mercury as a remedial agent is admitted by all, the mischievous consequences which daily arise under its misguided administration, are well calculated to excite prejudices against it, and to prevent its use under circumstances, where it might be capable of rendering inestimable benefit. Mischief thus inflicted, and prejudices thus engendered, render it peculiarly desirable, that its properties should be so carefully investigated, and the conditions to which it is applicable so well defined, that a well established set of principles may be thus developed, by which its administration may

be safely and advantageously directed. This important and difficult task, Professor Sachs has attempted to perform, and we shall endeavour to present a kind of summary of his labors.

The work before us consists of two parts. The first is devoted to the pharmaceutical history of mercury and its principal preparations, and was drawn up, as we are informed by the author, by his friend and collaborator, Dulk. The second, comprising the greater part of the work, is taken up with the consideration of the therapeutical properties of the article, and its application to the different forms of disease, in the treatment of which it is admissable. Our remarks will be restricted to the second part of the work.

Mercury, in its crude metallic state, is incapable of producing any other action on the living organism, than that which results from its mechanical agency. To enable it to do so, it must be previously brought into a state of combination with some other body capable of acidulating or oxidating its base, and thus converting it into a compound, possessing more or less solubility. Even the *emplast. Hydrarg.* and the *unguent. cinereum*, though active agents, mostly acquire their activity by the mercury being converted into a soluble salt, by uniting with the acids thrown off with the cutaneous transpiration. The metal is for the most part merely in a minute state of division,—a condition which does not render it capable of producing any dynamic effect, but which nevertheless facilitates its conversion into a soluble salt, when applied to the skin, because it favors its union with the free acids eliminated by the process of exhalation. Dr. Sachs very properly remarks, in support of this axiom, that as the epidermis is incapable of transmitting the metallic mercury, the article can produce no effect while it retains that character, since the part to which it is applied being unorganized, is not endowed with any susceptibility upon which an impression can be made; consequently the remedy is only capable of being absorbed, after it has been rendered soluble by combining with the free acids thrown off by the skin. Having acquired this property, it readily traverses the epidermis by imbibition or *endosmose*, and thus reaches the susceptible structures situated beneath that pellicle.

Previously to considering the therapeutical application of mercury, it will be useful to ascertain what effects it produces on the animal economy. These differ, according to the dose in which it is administered, the length of time it is continued, and the state of the system and other circumstances under which it is employed.

When prescribed in small doses, and continued for some time, its immediate effects are, more or less stimulation of all the mucous surfaces, as the respiratory, the digestive, and the genito-urinary, and soon after, a similar modification of all the dermoid and glandular apparatus. The secretions are generally increased, especially those of the mucous mem-

brane of the alimentary canal, the liver and skin. There is likewise augmented exhalation. The properties of both the secreted and exhaled fluids are considerably modified: the mucous is rendered more viscid; the urine becomes turbid; the dejections from the bowels are thinner, and of a darker or greener hue than is common: the cutaneous transpiration becomes clammy, and frequently imparts an unpleasant sensation, and the epidermis is more or less shrivelled. To these symptoms, are superadded others, which denote more or less gastric disturbance. There is an unpleasant taste in the mouth; the breath is offensive; the tongue is furred; the appetite is impaired to such a degree, in some cases, as to occasion a complete disgust for all food, and the pulse is excited. Should the medicine be discontinued under these circumstances, the nutritive actions are in a few days restored to their former integrity, and in some cases, are even more perfectly executed than before the administration of the article.

Besides these, there is a secondary train of effects developed by the operation of mercury. Should it be administered where there is hypertrophy of an organ, induration and enlargement of the glandular structures, morbid deposites or exudations in any of the splanchnic cavities, or in the parenchyma of the organs, or in fine, where there is a preternatural viscidity of the fluids, these pathological states will often experience a rapid amelioration, and finally disappear. These effects have been generally attributed to the development of an increased activity of the absorbent vessels by the mercury; but Professor Sachs objects to this explanation as unsatisfactory.

The third series of effects, or modifications, produced by small doses of mercury, constitute what the author denominates the *cachectic state.* It is characterized by a defective and depraved state of the blood, general feebleness, loss of muscular energy, relaxation of the general habit, great paleness of the countenance, a dingy aspect of the whole skin, perversion of the secretions and excretions, cachocymia, loss of appetite, and impaired digestion. There is great weakness and irritability of both sensitive and motor nerves,—so much so, that the individual is preternaturally excitable, and is affected by slight causes, while the enfeebled voluntary muscles are in a constant state of uncontrollable tremor. The pulse is preternaturally excited, frequent, small and tense; the individual is light headed; the skin is dry, and there is much thirst, together with a sense of heat, and dryness in the mouth, (*mercurial fever.*) The respiration is hurried; the parotids tumefied; the neck distended; the gums are intensely red, swollen, and separated from the teeth, so that the latter seem to be elongated, and are loose in their sockets, and a profuse discharge of saliva takes place from the salivary glands. With this condition of the glands of the mouth, there is probably a similar modification of the acts of the pancreas, as this seems to be indicated by the extreme offensiveness of

the dejections by stool. At this juncture, sometimes earlier, the individual experiences violent pains of the bones and joints, (*dolores osteocopi,*) and his sufferings are extreme, inasmuch as, besides the extreme debility and emaciation, the inflamed and ulcerated condition of the mouth, and the swollen state of the tongue and fauces, render speaking, swallowing, and even respiration exceedingly difficult and painful. The assemblage of these phenomena constitutes what is called the mercurial disease, (*hydrargyrosis,*) which is frequently accompanied with a scorbutic condition, marked by softening and swelling of the bones, (*Tophi,*) hemoptysis, &c.

It should be remarked, that in many cases, where the greater part of these phenomena are absent, mercury gives rise to ulcerations within the mouth, especially in the gums, cheeks and palate, and upon the surface of the body, which bear a striking resemblance to those of a syphilitic character, from which they cannot at first be easily distinguished; but by watching their progress, it will be found, that the mercurial ulcer spreads with greater rapidity than that which depends upon the venereal virus. They pour out a thin, dirty, acrid ichor, which corrodes the surrounding parts and involves them in the same morbid process. Like the venereal ulcers, moreover, they are exceedingly protracted, and sometimes continue for years, resisting with extreme obstinacy all treatment directed for their removal. The mercurial disease and syphilis may indeed become so intimately blended or associated with each other, as to render it impossible to discriminate between the phenomena to which they give origin.

It is worthy of observation that mercury is capable of giving rise to the same train of phenomena in the healthy, as in the diseased state of the constitution. Hence artizans who are constantly exposed to its influence, as for example, smelters, gilders, looking-glass makers, &c. are frequently affected with all the distressing phenomena of the mercurial disease. But in both health and disease, the development of the peculiar effects of the article is influenced by the condition of the organization; always taking place with the greatest facility where the nutritive powers are feeble, and with more difficulty where they are strong. Hence the ability of children to bear it better than adults.

As far back as the sixteenth century, mercury was administered in large doses for the cure of the venereal disease, not exactly from the motive for which it is at present prescribed,—the idea that it is a direct specific against the virus which generates the phenomena of that formidable malady,—but under the belief, that salivation is the natural crisis of the mercurial fever, and that this disease thus brought to an issue, its termination should be regarded as the natural crisis of the syphilitic affection. Hence the article was administered in large doses. It was deemed an object of primary importance to establish a free and copious salivation with all possible despatch, and so soon as that could be effected, all that was

deemed necessary was to keep it up, until by its critical influence it should free the system of the venereal virus. A similar practice is still pursued by some distinguished individuals, probably not with precisely the same object, but certainly in too many instances, with the same mischievous results. That mercury administered in either small or large doses is capable of eradicating syphilis, no one we presume will at present deny, yet that it does so by establishing a critical fever, and effecting a resolution of that fever by a flow of saliva from the glands, is disproved by all reason and analogy. Its remedial efficacy can be secured without the development of either fever or salivation, and besides, there are many articles of the materia medica, which are capable of exciting the salivary secretion, and yet possess no power whatever in overcoming the venereal disease. Still, there are circumstances under which mercury may be administered in large doses, and even repeated, with advantage. It impresses important modifications upon the nutritive acts of the system, which, under a proper direction, are capable of contributing materially to the removal of its pathological states, and it is only when it is not properly adapted to the state of the organization, or when the dose is pushed to a dangerous extent, that it gives rise to the formidable consequences which are sometimes seen supervening during its employment. When a quantity too great for the susceptibility of the organization is given, especially when the preparation employed is one which is readily soluble in the stomach, its operation is mischievous in a high degree. It excites, according to our author, violent pain and inflammation of the stomach and intestines, which is apt to assume a gangrenous tendency, and prove rapidly fatal. Even the outward habit of the body indicates a proclivity to this state of gangrene, and the examination of the internal organs fully reveals it. The recovery of the system from the injury inflicted upon it is slow and of doubtful issue, and even after the inflammation and salivation have disappeared, there either remains a total want of power of some part, or protracted sufferings and disorganization of the viscera of the abdomen or thorax, or a general marasmus. In short, there is developed a formidable derangement of the whole nutritive apparatus, by which the functions of nutrition are disturbed or broken up, and the nervous system is thrown into either a state of anæsthesia or hyperæsthesia.

As regards the modus operandi of mercury, professor Sachs proposes as a fundamental axiom, that its direct tendency is to weaken the activity of the powers of nutrition. He therefore denies the truth of the assumption adopted by many therapeutists, that its efficacy depends upon its power of invigorating the action of the absorbent vessels, and thereby promoting absorption. The two leading acts of the nutritive apparatus are, the formation of the blood, and its conversion into the living solids,—the development of the fluid and solid elements of the organization. A

pathological state of the general process of nutrition can, therefore, only take place in one of the four following ways: 1. both conditions of nutritive life are in a state of exalted activity: 2. they are both in an enfeebled condition: 3. the two acts, viz. the formation of the blood and its conversion into the organic solids, are in a state of disharmony with each other, so that one of these functions is performed at the expense of the other. This pathological condition is always dependent, directly or remotely, upon some disturbance of the nervous influence. 4th and last, they are both deranged or perverted by some peculiar morbid quality of the powers by which they are accomplished, so that the pathological states either absolutely, or at least in their species, are not dependent upon the quantity, but the quality of the nutritive energies. According to these principles there are four families or subdivisions of the diseases appertaining to the system of vegetative or nutritive life. Inflammation, with its generic and specific modifications; Atony; a want of harmony between the two fundamental acts of nutrition, which however, either by cause or effect, are intimately associated with each other; and proper nervous diseases.

Upon these propositions, which he regards as well founded, the author predicates the therapeutical application of mercury, and thinks that all the phenomena presented by its operation on the animal economy, must be explained upon principles deducible from these fundamental laws of general pathology. With these views, therefore, after detailing several arguments against some of the leading opinions which have been inculcated relative to the action of mercury, he goes on to speak of its special application in the treatment of disease.

In the prosecution of this portion of his task, he adheres throughout, to the law already laid down;—*that the natural tendency of mercury is to depress directly, or undermine, the whole of the powers of vegetative or nutritive life.*

The first topic treated under this head, is *inflammation.* This process or condition is divided into the three following varieties, according to the parts affected: the *sensible*, the *irritable*, and the *vegetative.* The author defines it a condition in which there is reaction, either absolute or relative, of all the organic systems, with increased energy.

At the outset of his observations, professor Sachs asks the question,—should mercury be considered a direct *antiphlogistic*, and to what extent? A decision must, he thinks, be given in the negative, when inflammation is considered in strict relation with the two fundamental systems,—the sensitive and the irritable, because, as before remarked, mercury has in its modus operandi no direct relationshisp with either. But if it be borne in mind, that the process of nutrition can only be considered as a result of the combined action of the two fundamental organic systems, and especially, that inflammation, so far as it consists of a state of reaction, with

exalted energy, must likewise, in all cases, disturb more or less the acts of nutrition, it will appear plausible to infer, that although mercury may not be properly an antiphlogistic, there is nevertheless a period in the progress of the inflammation, in which it may be advantageously employed, as a means capable of producing a good effect.

(To be continued.)

Library of the Medical Sciences. The American Cyclopædia of Practical Medicine and Surgery; a digest of Medical Literature. Edited by Isaac Hays, M.D. Surgeon to Wills' Hospital; Physician to the Philadelphia Orphan Asylum; Member of the American Philosophical Society, &c. &c. vol. i. p.p. 560. Philadelphia, 1834.

Since the publication of the large French *Dictionnaire des Sciences Médicales*, and the valuable though diffuse information contained in it, an impulse has been given to the adoption of this form of conveying scientific knowledge in preference to others, and the success which attended the *exploitation* in the hands of Pancoucke has induced other bibliopolists to follow in his wake. To this we owe the two editions of the excellent *Dictionnaire de Médecine*—the *Dictionnaire de Médecine et de Chirurgie pratiques*—the *Dictionnaire abrégée des Sciences Médicales*—the *Enclopædisches Wörterbuch der Medicinischen Wissenschaften;* and the *Encyclopædia der gesammten Medicinischen und Chirurgischen Praxis*, of Most; the London *Cyclopædia of Practical Medicine*, and the *Dictionary of Copland;* besides the American Cyclopædia, and numerous small dictionaries on detached portions of Medical and Chirurgical Science.

Satisfied of the value of this mode of communicating knowledge—the easiest of reference, and the most complete in its details, in consequence of the monographs being assigned to different scientific individuals—the able editor, Dr. Hays, engaged in the work, whose title is at the head of this article; and aided by the liberality, characteristic of the enterprising publishers, he has succeeded in placing it before the public in a form, which may enable it to vie with any similar undertaking in any country.

When the Cyclopædia first made its appearance the times were unpropitious. The whole country was suffering under pecuniary embarrassments, which occupied the minds of all classes, so as to largely diminish the number of readers, and consequently to prevent the sale of books to a degree, perhaps unprecedented. But now that commerce is reviving, and confidence re-established; that the minds of men can be diverted from their pecuniary concerns, and be directed to objects of cultivation, the arts and the sciences will again receive their due attention, and amongst the products of the latter none will merit a more

marked attention than the "*American Cyclopædia of Practical Medicine and Surgery.*" Already it has received the most favorable notice from different foreign reviewers, as well as in our own periodicals; and abroad it is admitted to be in no wise inferior to their best productions of the kind; whilst it must necessarily rank above the English Cyclopædia, in consequence of the wider extent it embraces, if not for the superiority of the individual contributions—which we, however, unhesitatingly award to it.

When the Cyclopædia was first undertaken, it was announced that a part would be published every month, if practicable. This, partly for reasons already stated, has not been found feasible: the average has not, indeed, been more than one in three months, so that if it were to extend to forty parts, as was, and is contemplated—although we suspect it will largely exceed this number—it would take ten years from the appearance of the first part to complete it. This tardy issuing of the numbers has, we know, alarmed many, and deterred them from subscribing,—the older practitioners, especially, being fearful that a period to their existence might arrive before a term was put to the publication; and we feel convinced, that unless the work proceeds more rapidly and regularly, many, who are already on the list of subscribers, will withdraw their names. The inconveniences produced by the delay are, however, sensibly felt by the editor, and will, we are sure, so far as rests with him and the publishers, be obviated in future. In his advertisement, affixed to Part 5th, he remarks:

"The publication of the Nos. of this work has been retarded much beyond the periods assigned for their appearance, in consequence of *some* of the contributors not furnishing their articles in time. This delay has been a source of extreme regret and mortification to the editor; and to obviate it every effort has been made, though in vain. The active exercise of the profession is little favorable to literary labor and to the extensive research which the preparation of the articles of the Cyclopædia demands, and yet it is evident that only to those engaged in extensive practice could the composition of many of the articles be entrusted. That the same delays will not occur hereafter, there appear reasonable grounds to believe. It is confessedly at the commencement of all enterprises that the greatest difficulties are to be encountered; and as those engaged in the work have been uninterruptedly proceeding in their labours, a considerable mass of materials have now accumulated in the hands of the editor. Nearly all the articles in letter A are actually written, or in a state of great advancement. Wood cuts of all the arteries are also in preparation, for the article on the anatomy of those vessels, and it is proposed, should the patronage afforded by the profession justify the enterprise, to give wood cuts illustrative of the whole anatomy of the body, of the progress of labour, of the instruments employed in surgery and midwifery, &c. and to proceed with the work with increased activity."

The first volume being now completed, the editor refers to it to decide how far his promise, held forth in the prospectus—that the work should present "a digest of the existing state of knowledge in all the branches of the healing art"—has been fulfilled. Any one, we think, who will carefully and unprejudicedly peruse it, or even glance over the articles, must at once decide in the affirmative. The best foreign authorities have been explored by the contributors, whilst much original matter, relating to individual observation and reflection, enriches the pages. "As to the amount it contains of new matter relative to American medical and surgical practice," says Dr. Hays, "it is confidently believed, that the expectations that may have been excited, will be more than realized. From the liberal and honorable manner, in which some of the most distinguished members of the profession have placed their *unpublished* observations and cases, at the disposition of the editor and his colleagues, this work presents even more of an original and American character than was provided; and this will be found to be to a still greater extent the case as the work proceeds. The article *Anus* for the succeeding number embraces many original observations of Dr. Physick, relative to the anatomy and some of the diseases of that organ, and which have been with the utmost liberality communicated by that distinguished ornament to our profession."

The following is the list of contributors to the volume with their respective contributions.

Franklin Bache, M.D. Professor of Chemistry in the Philadelphia College of Pharmacy, and Physician to the Penitentiary	*Acetates; Acetic Acid; Acids; Acupuncture; Albumen; Alcohol; Alkalies; Alum; Alumina; Amber; Ammonia; &c.*
N. Chapman, M.D., Professor of the Institutes and Practice of Physic and Clinical Practice in the University of Pennsylvania	*Angina Pectoris.*
Reynell Coates, M.D.	*Abdomen* (Surgical Pathology of;) *Adhesion.*
D. F. Condie, M.D.	*Acrodynia; Ages; Amnesia; Anasarca; Angina.*
W. P. Dewees, M.D., Adjunct Professor of Midwifery in the University of Pennsylvania	*Abortion; After-Pains; Amenorrhœa.*
Gouverneur Emerson, M.D. . . .	*Achor; Acne; Affusion; Alopecia.*
R. E. Griffith, M.D. Editor of the Journal of the Philadelphia College of Pharmacy	*Abortion* (Med. Leg.); *Absorbents; Acalypha; Acclimatement; Acer; Achillea; Actæa; Adiantum; Adipocire; Æsculus; Agave; Ages* (Med. Leg.); *Agrimonia; Alcornoque; Alexipharmic; Alisma; Alpinia; Althæa; Ambergris; Amomum; Anagallis; Analeptics; Anaphrodisia; Anda; Andira; Anemone, &c.*

E. Geddings, M.D. Professor of Anatomy in the University of Maryland	*Abdomen* (Anat. of;) *Acephalus; Acervulus Cerebri; Adipose Tissue; Amputation; Anatomy; Anencephalus.*
Thomas Harris, M.D. Surgeon in the United States' Navy, and one of the Surgeons to the Pennsylvania Hospital	*Abscess.*
H. L. Hodge, M.D., one of the Physicians to the Pennsylvania Hospital.	*Aneurism.*
Wm. E. Horner, M.D., Professor of Anatomy in the University of Pennsylvania	*Ambulance; Anchylosis.*
Samuel Jackson, M.D., Assistant to the Professor of the Institutes and Practice of Medicine in the University of Pennsylvania, and one of the Physicians to the Pennsylvania Alms House Infirmary	*Absorption; Alteratives; Anemia.*
J. C. Warren, M.D., Professor of Anatomy and Surgery in Harvard University, Boston, ...	*Air*, its action when admitted into the veins.
George B. Wood, Professor of Mat. Med. and Pharmacy in the Philadelphia College of Pharmacy .	*Abies; Acacia; Aconite; Aconitum; Acorus; Agathosma; Aletris; Alkanet; Allium; Almonds; Alnus; Aloe; Aloes; Ammonia; Ammoniac; Amygdalus; Amyris; Anacardium; Anchusa; Anethum; Angelica.*
Isaac Hays, M.D., one of the Surgeons to Wills' Hospital, &c. .	*Abdomen* (Physiology, Symptomatology and Pathology of;) *Abstinence; Action; Adynamia; Ægilops; Agony; Air* (action upon the tissues of;) *Albino; Aleze; Amaurosis; Anchylops; Anchyloblepharon; Angeial; &c. &c.*

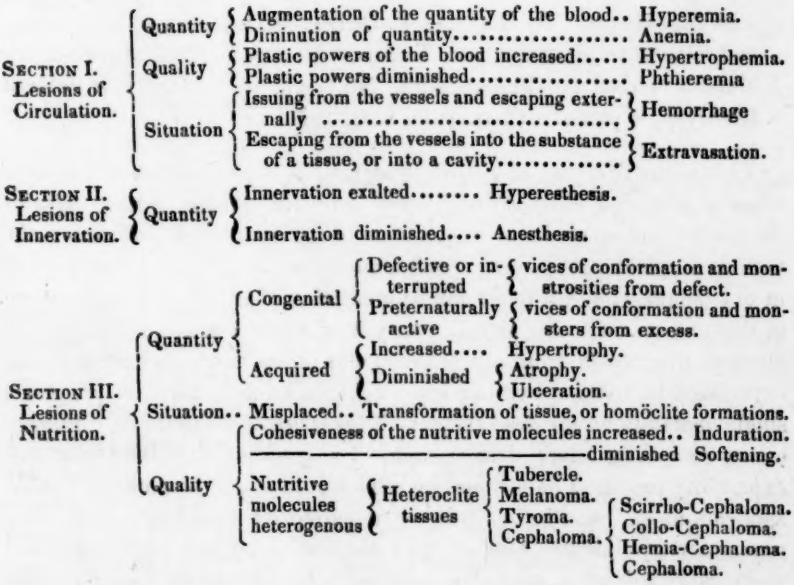
All the individuals in this list are well known for the ability and zeal, which they have exerted in the cause of medical science.

Of the particular articles it is impossible for us to speak except in the abstract. They are extremely creditable to the respective writers, and exhibit the judicious selection made by the editor, so far as regards fitness, whatever may be the objection to some of the contributors on the score of want of punctuality in furnishing their contributions. "*Bis dat qui cito dat*," is a maxim which every contributor to such an undertaking, and every editor, should make his own. Hope deferred proverbially sickeneth the heart, and when the object is attained, it is not grasped as fervently as if it had been presented earlier, and when the mind was attuned to a more propitious reception. The mental, as well as the corporeal appetite, loses its edge by postponement, and when the delayed repast is ready, we cannot forget the feelings of privation and annoyance, experienced during the period of protracted anticipation. This is an

additional reason for the more rapid and regular publication of the work in future.

An undertaking, thus well commenced, ought to *command* the patronage necessary for its full success. It would be strange, indeed, if amongst the multitude of intelligent practitioners, and students in every part of the Union, sufficient encouragement should not be afforded to enable the work to be persevered in, and illustrated in the manner proposed in the editor's advertisement. In a science so rapidly progressive as medicine, without some such publication, the physician must find that he falls behind his scientific contemporaries; whilst the object of such a Cyclopædia is to give the "circle of learning" on the subject it embraces—the existing state of the science—and in as small a compass as is practicable.

Even the technology of the science has been so much augmented—if not enriched—of late years, that many of the modern publications—on physiology, and pathology more especially, must be wholly unintelligible to the practitioner who has ceased to be a student, (the day we trust will come when there will be none such to be met with in the ranks of the professsion,) for the short period of the last ten or fifteen years. In evidence of this, we may cite the following table of pathological lesions from the article *Pathological Anatomy*, contributed by one,—of whose abilities, and industry, his relation to this Journal precludes us from speaking, but of both of which ample evidence is furnished in the pages of the Cyclopædia.



- **Section IV. Lesions of Secretion.**
  - Quantity
    - Secretion augmented
      - Extravasation.
      - Flux.
    - Secretion diminished.
  - Quality
    - Modification of the natural secretions.
    - New secretions.
      - Organizable.
      - Not Organizable.....
        - Pneumatoma.
        - Hydronoma.
        - Pyonoma.
        - Colloma.
        - Steoma.
        - Alsoma.
        - Lithoma.
        - Melanoma.
        - Kirronoma.
        - Ephaloma.
        - Chloasoma.
  - Situation
    - Formed in unusual situations.
    - Transported to unusual situations.

- **Section V. Physical Lesions**
  - Physical Lesions of texture.—Wounds.
  - Physical Lesions of situation
    - Displacements
      - Dislocations.
      - Hernia
      - Prolapsus.
      - Retroversion, antiversion, invagination, inversion, inflexion, &c.
    - Accidental distortions, &c.

- **Section VI. Living products having no natural connexion with the organization.**
  - Entozoa.

We repeat, that the profession ought to afford its support to a work, which the editor promises all his efforts to render "useful as a text book for the student, and as a guide to the practitioner." Δ.

A Compendium of Operative Surgery; intended for the use of students, and containing descriptions of all Surgical Operations. Illustrated with engravings. By Thomas L. Ogier, M.D. Lecturer on Anatomy and Operative Surgery, and Thomas M. Logan, M.D. Lecturer on Materia Medica and Therapeutics. No.1, p.p. 26, 4to. and four colored lithographic plates. Charleston, S. C. 1834.

This is the first part of a work, designed, as the title expresses, to form a useful compend of operative surgery, with lithographic engravings, for the instruction of students of medicine in the method of performing the various surgical operations. Such a work has long been a desideratum in our language, and it must not be concealed, that our extreme poverty in this respect, indicates plainly that young gentlemen are too frequently allowed to go forth from our schools, after they have graduated, as the expression is, without ever having taken the knife in hand, to practise a single operation on the dead subject. This is not as it should be. Surgery exacts something more than science. Its operative department requires expert and practised hands, and he who would acquit himself well in its application, and not be considered a mal-adroit blunderer, must have previously familiarized himself with the knife, and the various acts and modifications of each operative procedure, by the repeated exercise and practice of them on the dead body. To enable students to prosecute these exercises with advantage, they require some manual, giving a con-

cise and perspicuous description of the different operations. The different treatises on operative surgery are too diffuse and elaborate for this purpose, and are rather suitable to the study, or to the practitioner, than the student in the dissecting room. The small manual of Averill, and that of Coster, translated by Godman, are good in their way; but they are defective in many of the most approved modern operations, and in many places, their descriptions cannot be well understood, for want of suitable graphic delineations of the more important operations, and the instruments requisite in their execution. Malgaigne's manual, now in course of publication in this city, is much more complete in its operative details, and will be highly valuable to students; but it is also liable to the same objection;—the want of proper graphic delineations. In this latter respect, therefore, the work of Drs. Ogier and Logan, if executed in accordance with the plan proposed by them, will supply an important desideratum in our surgical literature. That it will be so executed, we feel assured, as well from our knowledge of the authors, as from the manner in which they have performed their task in the first number.

The part before us comprises the subjects of incisions, punctures, sutures, hæmostatic operations, and ligature of the temporal, facial, and lingual arteries. All these subjects are treated in a concise, but perspicuous manner, and the various acts and procedures recommended, are those which have received the approbation of the best modern surgeons. The first plate represents the different kinds of incisions, and the instruments used in practising them,—the scalpel, bistoury, and grooved directory; the second gives a view of the face, with a delineation of the several varieties of sutures usually practised, as the interrupted, continued, twisted, quilled and looped; the third, hæmostatic instruments, consisting of the tenaculum, aneurism needle, Physick's forceps and needle for securing deep seated arteries, and torsion forceps; the fourth is a lateral view of the face and neck, representing, after the manner of Manec, the methods of applying a ligature to the temporal, facial and lingual arteries. They are in general well executed, and will be found to afford very valuable aid to the student, and even the practitioner, in the performance of the several operations which they represent. We have noticed a few faults, but they are fortunately not important. The most material are in plate 2, figures 1, 2 and 3, in which the sutures are placed altogether too near the edge of the wound. Trifling defects like these can, however, be easily obviated in the future parts of the work.

It was originally proposed to complete the work in eight parts, each containing four plates; but the authors state, that they will be obliged to make each part comprise seven or eight plates. Judging from the specimen which is now before us, we feel assured, that the work will be exceedingly useful to students, and we can confidently recommend it to them, and to practitioners generally, as an excellent compilation on the subject of which it treats.

Analysis of the menstrual blood obtained from a female affected with Atresia Vaginæ, which prevented that fluid from escaping. By Moritz Samuel Heilbut, *under the direction of* L. Gmelin.

We shall not detail the various processes and tests adopted, which the name of Gmelin alone is sufficient to convince us, were in accordance with the best lights afforded by modern chemistry, but merely report the results obtained.

The following are the results afforded by a comparison of the menstrual, with the arterial and venous blood. The arterial and venous blood is red—the menstrual fluid is of a chocolate color. Like common blood it contains cruor. The specific gravity of the human blood is, according to Prout, 1.03—1.05; that of the menstrual blood, 1.011; a difference which is explained by the admixture of various materials with it. The blood, in its dry state, according to Prevost and Dumas, possesses a specific gravity of 21.61; the dry residue of the menstrual blood, 10.55. One striking difference is, that the menstrual blood, when it has been long excluded from the atmosphere, does not coagulate. The cause of this is partly the smaller quantity of fibrine; partly the admixture of a considerable quantity of the mucous secretion of the vagina and uterus, which by becoming incorporated with the fibrine, prevents it from coagulating into a solid concrement. In other respects, the menstrual blood contains the same constituents as the arterial and venous: as fibrine, albumen, cruor, osmazone, cholesterine, a substance resembling adipocere (mucous?) muriate and sulphate of potash and soda, phosphate of lime, oxide of iron, and magnesia. The potash, soda, lime, and magnesia are without doubt, in a state of combination with the muriatic, sulphuric and acetic acids. The physical properties are the same as those which pertain to the arterial and venous blood. Its fibrine is only a little thinner, and retains its color, after repeated washing with cold water—a circumstance which is probably owing to the admixture of mucus, which cannot be removed by the water.—*Hecker's Wissenschaftlichen Annalen der gesammten Heilkunde*, 1833—*from Dissert. Inaug. de Atresia Vaginæ, adjectis duobus casibus Atresiæ Vaginalis, &c. Auctore Maurit. Sam. Heilbut. Heidelbergæ*, 1832.

Spontaneous cure of Intussusceptio.—Dr. Hedinger reports the case of a woman, aged fifty-one years, who was affected with intussusceptio, and passed by stool a portion of the small intestines, forty inches in length. —*Hecker's Wissenschaftlichen Annalen der gesammten Heilkunde*, 1833.

COLLECTANEA.

Apis vero ratio media est; quæ materiam ex floribus agri et horti elicit, sed tamen eam propria facultate vertit et digerit.—Nov. Org.

1. Professor Ehrenberg *on the structure of the brain and nerves.*—The cortical substance of the brain consists of a very fine, close, vascular network, conveying red globules, which upon its surface, becomes intimately interwoven with the vascular arrangement of the *pia mater.* Besides this fine plexus of vessels, I observed in the cortical substance, a whitish colored mass, composed of minute globules, amongst which some of larger size could be distinguished, disposed either in clusters, or in a longitudinal series. These large globules were perfectly free, but those of smaller size, wherever their extreme tenuity and delicacy admitted an accurate determination of their disposition, were found to be arranged so as to form filaments of great delicacy. In the vicinity of the medullary substance, the filamentous arrangement could be more distinctly seen, and at this point, the blood vessels were less numerous. The white or medullary substance, shewed still more distinctly a fibrous structure, continuous with the delicate filaments of the corticle portion, which coming from different portions of the superficies of the brain, were arranged into filaments or bands, and these latter disposed at first in a vertical direction as regards the convolutions, passed from thence, in a radiated direction, towards the base of the organ. They were not simple cylindrical fibres, but resembled more a string of pearls, the different pieces of which are separated from each other by slight intervals, or a tube, composed of a series of minute vesicles. They were all disposed in right lines, generally parallel with each other, but sometimes intercrossing. In a few instances I perceived one dividing into two, but no anastomosis between any of them could be discerned. Near the base of the brain, interposed between these bundles of vesicular fibres, others which were much thicker, were observed. In the latter, walls presenting distinctly an outer and inner surface were visible, from whence it is manifest that they are hollow cylinders, or tubes. These linear series of globules cannot, therefore, be with propriety either considered as fibres or filaments, but delicate tubes or canals, presenting a varicose, or articulated arrangement.

The internal part of these hollow tubes is transparent, and it may be inferred that they are occupied by water, or a watery vapour. The milk white appearance, therefore, which they present to the naked eye, is not proper to the walls of the tubes, but the fluid they contain. This white color does not exist in the cortical substance, which is composed of the points or radicles of the delicate tubes, which at this point merely have walls without the contents which exist in those of larger size. From these facts, it may be inferred, that the white color of the medullary substance of the brain is attributable to the contents of the tubes of which the organ is composed. The larger tubes of the brain converge towards its base, where the nerves take

their origin, and are continuous with their radicles.—*Hecker's Wissenschaftlichen Annalen der gesammten Heilkunde, from Puggendorff's Annalen der Physik*, 1833.

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2. Professor Ehrenberg *on the structure of the nerves.*—The optic, auditory, and olfactory nerves, which are the most important of the nerves of sense, are shewn by microscopical observations, to be composed of the varicose tubes of the medullary substance of the brain, which are thus prolonged from that organ, without undergoing any alteration. All the other nerves, except the central portion of the sympathetic, differ essentially from the brain, inasmuch as they present its structure under an entirely different form. All of them, except those enumerated above, consist of a parallel series of tubes, of $\frac{1}{120}$ part of a line in diameter, never anastomosing with each other, but collected into small fascicles, these into larger bundles, and the bundles, in their turn, into the proper nervous cords. Each fascicle, as well as the entire nerve, is surrounded by a kind of tendinous and vascular coat;—the neuralemma and pia mater. The different fascicles form frequent connexions with each other by a species of false anastomosis, the tubes of one fascicle intermixing with those of another, without any absolute fusion taking place between the two sets. It is in this manner, the nervous plexuses are formed, which bear a close similitude to the radicles of the nerves, and in the same way, the retina is constituted. In the minute radicles of most of the nerves, where they proceed from the superficies of the brain, I have discovered, in the space between the cylindrical tubes, others of about the same size, presenting the varicose or articulated arrangement. Whether by this disposition the nerves of sensation acquire their faculty of motion, from the admixture with their articulated tubes, those of a cylindrical character, is an interesting question which requires further investigations to decide. Thus far, I have been unable to determine, whether at a greater distance from the origin of the nerve, the cylindrical tubes are still associated with those which present the varicose or articulated arrangement. In the sympathetic, however, I have been able to observe distinctly, the minute articulated tubes intermixed with larger cylindrical ones.

The simple cylindrical nervous tubes present a striking difference from the articulated tubes which compose the brain. They have a much larger cavity, and their contents are more considerable and less transparent. In the living nerve, this material seems to consist in a slightly coagulated pulp composed of small irregular particles, sometimes forming a delicate reticulated or striated mass, which can be forced out of the tubes by slight pressure. When a nerve is divided transversely, the retraction of the neuralemma forces out the nervous pulp, which is of a white color, and was very properly denominated by Treviranus, *nervous medulla.* Reil, on the contrary, with less accurate discrimination, included under the appellation of nervous pulp or medulla, not only the proper pulp, but the assemblage of small sheaths in which each fascicle of it is inclosed, merely applying the name of neuralemma to the outer covering which is common to them all.

I have with great care, followed the cylindrical tubes of the motor nerves for some distance into the substance of the brain, and convinced myself that they are directly continuous with the delicate articulated or vericose tubes

which compose that organ, which, at the point at which they make their exit from it, or the spinal marrow, lose their jointed arrangement, the articulations becoming at first larger, and finally disappear,—the tubes assuming a cylindrical form. It was with much difficulty that I was enabled to convince myself of this fact, but finally discovered that it can be easily demonstrated, inasmuch as the radicles of the nerves, exterior to the substance of the brain, shew very distinctly this transition of the tubes from the articulated, to the cylindrical form. This fact is of considerable importance, since it shews, that the tubes which compose the nerves only have their cavities occupied by the proper nervous medulla, or pulp, after they have escaped from the brain or spinal marrow, and that so long as they are confined to these organs, and retain their articulated or varicose character, they are filled by a transparent fluid, possessing nothing of the white medullary appearance. It is manifest, therefore, that the milk-white, gelatinous, substance, composed of globules, of the elementary nervous tubes, does not consist of the proper medullary substance of the brain invested by small tubular sheaths of the neuralemma, since the elementary tubes of the latter are perfectly transparent, and their cavities are occupied by a homogeneous, transparent vapor, or a viscous material, which cannot be made to flow out from them. Hence the articulated tubes which compose the brain, may be compared to an extensive capillary vascular system, while the cylindrical tubes of the nerves, represent the vascular trunks.

From these results, the question naturally suggests itself, whether this gelatinous or white medullary substance, which is found in a coagulated state within the elementary nervous tubes after death, does not, during life, consist of a proper fluid composed of globules, which circulates through them, as the blood is circulated by its vessels,—a hypothesis which was for a long time adopted, until the ingenious experiments of Alexander von Humboldt refuted it, and established Reil's theory of a nervous atmosphere. Leeuwenhoek, indeed, represents that he had been able to perceive this nervous circulation; but notwithstanding all my investigations, I have not been able to discover any thing of the kind. Nor is a circulation necessary to explain the operations of the nervous system.—*Hecker's Wissenschaftlichen Annalen der gesammten Heilkunde*, 1833.

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3. *Globules of the human blood*—By Prof. WAGNER of Erlangen.—I have repeatedly measured the size of the globules of my own blood, and that of other persons, both male and female, and have constantly obtained the same results. They are round, but not all of the same size, as represented by many observers. Most of them I found to be $\frac{1}{350}$th part of a line in size, others somewhat larger, being nearly $\frac{1}{300}$th of a line, while many were smaller, and did not measure more than $\frac{1}{400}$th of a line, and could scarcely be distinguished. The average diameter may, therefore, be estimated at $\frac{1}{4000}$th part of an inch As regards the contradictory estimates which have been made of the size of the blood globules, it is owing in part, as remarked by Burdach, to the imperfection of the micrometers employed, and the want of accuracy in the observations. Hence, have originated such differences as those obtained by Home, who estimated the diameter at $\frac{1}{141}$th parts of a line, and those of Young, who represents it at $\frac{1}{305}$th. The results of my admeasurements correspond, for the most part, with those of Johannes Muller, and E. H. Weber. From

these observations, it may be inferred, that about 150,000 blood-globules occupy each square line.

Whether the human blood-globules are, on both surfaces, convex, or concave, or convexo-concave, is a question which it is difficult to decide. I at first supposed, that they were on both sides, uniformly convex. But by more recent observations, I have discovered, that when they repose upon the margin, it is difficult to distinguish any convex projection in the centre. The edge, indeed, resembles that of a thick piece of coin. It is represented by Young, that they are concave in the centre, and Johannes Muller remarks, that when they are examined with a good glass, the whole surface, from the edge to the centre, seems to be concave. I have observed the same appearance, especially when they were diluted with a solution of muriate of soda. Schmidt* has described them as compressed, with two plain surfaces, with a prominent rounded border. Muller observes that they are four times smaller in their flat than their broad diameter, which is probably correct; and it may hence be inferred, that in their thickness, they measure about $\frac{1}{1000}$th to $\frac{1}{1600}$th part of a line. When diluted with simple water, they swell somewhat, and shew a greater difference of volume.—*Zur Vergleichenden Physiologie des Blutes, von Rudolph Wagner*, 1833.

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4. *The nucleus of the blood-globules, and the proper lymph globules of the blood*—By Prof. Wagner, of Erlangen. It is an old, and as yet, an unsettled question, whether the blood-globules are composed of a central nucleus, and an external incrustation or casement of coloring matter. Schmidt, influenced by the researches of his predecessors,—Hewson, Rudolphi, Prevost and Dumas, as well as by his own investigations, has advocated the belief of an internal nucleus and an investing cyst. E. H. Weber, on the other hand, has contended strongly against this hypothesis, and affirms, that the appearance of a round central nucleus in the blood-globules of man and the mammalia, and the elliptic in the plano-oval globules of birds, the amphibia, and many fishes, is owing to a refraction of the rays of light. I was long in doubt which of these opinions to adopt, but finally espoused that of Weber, without, however, reducing it to the test of experiment. J. Muller has finally demonstrated, that the elliptic blood-globules of frogs lose their external coating in water, so as to leave the colorless central nucleus, which is insoluble, divested of its investing coloring matter, which is four times smaller than the elliptic globule itself. My own experiments, especially with the blood of fishes, corroborate this opinion. It still remains a question, however, whether the blood-globules, while they circulate in the vessels, consist of this central nucleus, and external hull or covering. It at least appears, that the latter is only susceptible of being separated from the former after it has been acted upon by water, and that in its perfectly fresh state, it adheres intimately to the nucleus. J. Muller thinks it possible, that the nucleus of the elliptic blood-globules may consist of the globules of the lymph and chyle. He also supposes that the round globules, which are found in the blood of the frog's heart, are derived from the lymph-globules which have entered the circulation; and I have discovered the same round globules in the pigeon, and

* Ueber die Blutkorner—Wurzburg, 1822.

some fishes. He moreover subjoins, that the nucleus of the blood-globules of the frog, freed from their incrustation by acetic acid, are about as large as the more rare species of globules in the blood, or the globules of the lymph; but the two last are round, while those which are separated by acetic acid are elliptic, and those of the salamander are flat. In my own experiments, I have not been able to succeed with the acetic acid, but the blood-globules of fishes, treated by water, did not furnish oval, but round nuclei. Another fact which militates against the inference, that the nuclei of the blood-globules are furnished by the lymph-globules is, that those which were obtained in the manner represented, were smaller than the globules of the lymph. This objection, however, is not conclusive, since the latter may become enlarged, or before they become invested with the crust of coloring matter, may part with a portion of their substance, or what is also possible, the water in removing the latter, may at the same time take with it more or less of the substance of the nucleus, thus rendering it smaller than the oval speck or nucleus of the blood-globules, while they are surrounded by their coating. Although it is probable, that the round globules of the blood of birds, amphibia, and fishes, are derived from the lymph, the inference is not fully established. To render it valid, farther microscopical admeasurements of the lymph-globules of these animals will be necessary; since, notwithstanding the valuable experiments of Hewson, on the lymph of birds, from which it appears, that the globules of that fluid are smaller than those of the blood, yet larger than the central nuclei of the globules of the latter, the conclusions formed cannot be regarded as positive, as the fact was not reported by himself, but by Falconer. Thus far I have been unable to obtain the lymph of these animals in its pure state, on account of the difficulty of finding their lympatic vessels and glands.

Whether the blood-globules of man and the mammalia, contain a central nucleus, I have not been more successful than J. Muller in deciding, on account of their extreme minuteness. One of my experiments, however, on sheep's blood, favors such a presumption.—*Ibid.*

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5. *Case of obliteration of the Aorto*—By A. Meckel, of Berne.—A stout, robust peasant, aged about 35 years, who had previously enjoyed good health, whilst engaged in carrying a sack of corn to market, was suddenly seized with great weakness, which rendered him unable to proceed, and he was consequently conveyed to the hospital. The prostration disappeared in the course of a few hours, but was followed by a dizziness of vision, which continued for several days. He was finally attacked with a gastric affection, accompanied with pain in the chest, loss of appetite, bilious and mucous dejections, *without there being, however, any remarkable disturbance of the pulse.* By the sixth day, his disease seemed to be entirely subdued. The patient rose from his bed, eat with a good appetite, seated himself cheerfully by the stove, and fell down dead.

As the individual was without friends, his body was appropriated to the purpose of anatomical demonstration. On laying open the thorax to inject the arteries, the pericardium was found distended with black blood, which had proceeded from a rupture of the right auricle. The walls of this cavity were slightly thickened and softened, and the rupture, and consequent extravasation of blood, were the cause of death. A further investigation displayed a

very considerable dilatation of the ascending aorta. The left carotid and left subclavian were then tied, and the pipe introduced into the innominata. As the whole of the injection which had been prepared, was thrown in without meeting with any obstacle, it was thought that the injection had failed, and the body was thrown aside and another substituted. On laying open the abdomen, however, it was ascertained, that all the vessels of that cavity were filled, and that the injection had even reached the feet. Prosecuting the examination farther, it was found, that the aorta, immediately below the arterial ligament, was obliterated, and reduced to the size of a small straw. It was discovered at the same time, that a most remarkable *rete mirabile* had been formed between the vessels which proceed from the arch, and those which are given off from the posterior part of the descending aorta. The whole of the intercostals, the internal mammary, inferior thyroid, transverse cervical, and supra-scapular, were enormously enlarged, and convoluted, so as to resemble varicose veins.—*Meckel's Archives für Anatomie und Physiologie.*

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6. *Inveterate syphilis treated with phosphoric acid*—By Dr. Heinecken.—An individual had been affected with syphilis a year or eighteen months, and had, without success, submitted to the employment of various remedies. His disease, at this time, consisted of ulcers in the neck, exostosis of the cranium, and over one orbit, tumefaction and pain of the nose, accompanied with the discharge of an acrid bloody ichor, and pain of the antrum highmorianum. He had also a kind of herpetic exudation from nearly the whole surface of the body, and extreme pain of his bones, and eyes, at night, which rendered it almost impossible for him to move. Under these circumstances, Dr. Heinecken prescribed phosphoric acid in as large doses as the stomach could bear, together with a strong decoction of the solanum dulcamara. The continuous employment of these means, brought about a complete and permanent cure of the disease.—*Otto Bibliothek for Læger, Kiobenhavn,* 1834—*from Pierer's Allg. Med. Zeitung.*

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7. *Dr. Tross's pectoral powder.*—The following powder is recommended as a useful soothing demulcent, for phthisical patients.

℞ Gelatinæ lich. Islandici ℔ss.
Sacch. alb. ʒiv.
Gumm. Arabici ʒi. m.

Exsicc. leni calore in vase porcellaneo, donec massa in pulverem redigi possit. One or two tea spoonsfull of this powder is to be taken daily, first dissolved in a small quantity of cold milk, to which warm milk is to be afterwards gradually added.—*Otto's Bibliothek for Læger, Kiobenhavn,* 1834—*from Kleinert's Repert.* 1833.

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8. *Sulphuret of potash in asthma.*—An individual laboring under a severe attack of spasmodic asthma, applied to Dr. Carusi, who having ordered the aqua lauro-cerasi, internally, and frictions with tartar emetic ointment, without success, directed sixteen grains of the sulphuret of potash, rubbed into a paste with honey. This quantity was divided into four portions, one of which was given three times a day. After the administration of the last dose, the

asthma entirely disappeared, and the cure was complete.—*Otto's Bibliothek for Læger, Kiobenhavn*, 1834, *from Annali universali di medicina.*

9. *Extirpation of a steatomatous omentum*—By Dr. HARTMANN.—The subject of this case, had for a long time complained of a swelling beneath the peritoneum, in the region of the stomach, and desired that an operation might be performed for his relief. After making an incision of four inches in length, along the linea alba, a steatomatous tumor was exposed, connected with the omentum, and adhering to the intestines. The tumor was cautiously removed, and the parts replaced. Immediately after the operation, the patient felt comfortable, but hiccup soon came on, and death took place on the third day.—*Otto's Bibliothek for Læger*, 1834, *from Sanitat's Bericht. der Provinz Brandenberg.*

10. *Fish bones occasioning the death of a fœtus.*—Dr. Malin reports, that in the body of a fœtus, of about five months, which was well formed in both its upper and lower extremities, he discovered fish bones, which had occasioned its death. The mother, who had aborted about this period, had complained about the third month of her pregnancy, of acute pain in the region of the rectum, with purulent discharge; pain of the inguinal region; tenderness of the whole abdomen; fever; constipation, and dysuria.—The pains were bearing down; a watery fluid was discharged from the vagina, and the os tincæ was high up and dilated. These symptoms were subdued by antiphlogistic remedies, and the woman continued well for two months, at the expiration of which time, the pains recurred. Previous to the first attack, she had had a great craving for fish, and in eating them, frequently swallowed some of the bones. It is probable that in this manner they became lodged in the rectum, and worked their way from thence into the uterus.—*Otto's Bibliothek for Læger*, 1834.

11. *Episioraphy, a new operation for the cure of Prolapsus Uteri.*—By Dr. FRICK. Prolapsus of the uterus and vagina, Dr. Frick remarks, can never be remedied by machinery.—Of the numerous contrivances which have been devised for the purpose of maintaining the prolapsed organs in their situation, there is none, which, on account of the difficulty of its application, and the uneasiness and inconvenience it occasions, does not produce a greater evil than that which it is intended to remedy.

In those cases of prolapsus, where the organ can be easily replaced, and which are attended with but little pain, the displacement is generally endured without much inconvenience or suffering. But when the disease has been of long standing,—when the pelvis is preternaturally wide, and the constitution irritable, the female is generally very solicitous to obtain relief. In such cases, all the usual contrivances, from the simple sponge, up to the most complex machinery, will be ineffectual, and cannot be borne by the patient.—Any foreign body introduced into the vagina, will give rise to an augmented mucous secretion, and occasion ulceration and offensive discharges. On this account, it will be difficult to induce the individual to persevere in the use of the instrument; the disease will continue to increase, and will finally assume a more formidable character. This will be especially the case, should the patient belong to the laboring classes. Such individuals cannot maintain the erect pos-

ture for any length of time without increasing the tendency of the organ to descend, and as they cannot pursue their avocations while using the ordinary instruments, without suffering considerable pain, they are apt to lay them aside, and neglect their condition. The prolapsed parts will, therefore, become ulcerated, and indurated, and run into incurable disorganizations; and finally, the already enfeebled constitution of the patient will be worn out and exhausted by fever and emaciation, and death will close the scene.

All these difficulties may be obviated, and the disease effectually cured by Episioraphy, which is an operation instituted with the view of accomplishing an adhesion between the labia, and thus securing a natural barrier, by which the uterus and vagina will be prevented from prolapsing.

The operation is exceedingly simple, and is performed in the following manner. The patient is placed on the table, in the same way as for the operation of lithotomy, except that the hands and feet need not be tied. The operator seizes one labium between the thumb and fingers of his left hand, and with a sharp pointed bistoury, commences an incision about two fingers breadth below the upper commissure, and one finger's breadth from the margin of the labium itself. This cut must then be carried downward, with a bold sweep of the knife, to the fourchette, where it should terminate with a slight inclination inwards. In this manner, a slip of the labium will be removed, of the breadth of one finger. By a similar procedure a portion of the other, of the same size, must next be excised, taking care to unite the two incisions about a finger's breadth below the fourchette, at an acute angle, and include a portion of that frenum.

After securing the bleeding vessels, and arresting the oozing of blood from the spongy tissue, by sponging the part with cold water, the lips are to be brought together by suture in the usual way.—Previously to doing this, however, the operator should examine carefully the condition of the vagina and uterus, and if they require replacing, adjust them, and to maintain them in their situation, introduce a piece of soft sponge previously oiled, and transfixed by a ligature to withdraw it when necessary. The sutures must then be drawn close and the edges properly approximated as low as the fourchette, which will generally require from ten to twelve ligatures. The dressings should be simple, and secured by a T bandage. As it is desirable to obtain union by the first intention, and the contact of the urine might prevent it, that fluid should, during the first days after the operation, be drawn off by the catheter.

The aperture which is left above, will be sufficient to give exit to the menstrual discharge, and the mucous secretion of the vagina, and may even admit the consummation of the venereal act. Should conception take place, it will be easy, by means of a small incision, to make room for the passage of the child—*Annalen der Chirurgischen Abtheilungs des Allgemeinen Krankenhauses, in Hamburg, Bde.* 2, 1833.

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12. *Case of Constriction of the Aorta.*—By R. L. Nixon, A. B. The aorta, in its transverse portion, just at the point where it is joined by the ductus arteriosus, exhibited a very singular constriction, similar to what would occur if a sharp instrument had been pressed upon its upper surface until it had diminished the calibre by about one-half. There was not, however, any depo-

sition in its coats of osseous or calcareous matter at this point, and the ductus arteriosus was pervious. The aorta, in the remainder of its course, appeared perhaps a little narrowed in its calibre, but normal in structure, if we except a few atheromatous spots on its lining membrane; the pulmonary artery, natural. Upon passing in the finger for the purpose of examining the state of the aortic valves, we were surprised to observe that it could not find a passage either from the heart to the aorta, or *vice versa;* but upon laying open the vessel, the difficulty was very easily explained, the valves being, if not removed, at least completely obliterated by an irregular fleshy mass, which grew from the line of junction of the vessel with the heart, and almost totally filled the canal. Several particles of phosphate of lime were deposited in the mass, in particular, one very hard and white portion presented itself, about the size of a small bean. The communication between the heart and aorta was reduced to an irregular slit-like opening, through which a common probe could not pass without some difficulty; and yet, through it all the blood of the system found its way.—*Dublin Journal, July* 1834.

13. *Sulphate of Copper in Croup.*—In Hufeland's *Journal für Practisch. Heilkunde for January*, 1834. There are some observations on this subject, by Drs. Serlo and Malin, calculated to inspire considerable confidence in the efficacy of the remedy. Dr. Serlo having been called upon to treat a child affected with croup, resorted to calomel, leeches, tart. emetic and blisters, without affording much relief. He resolved to try the sulphate of copper which had been recommended by Hoffmann. He administered five grains of the sulphate, and in a few minutes repeated fits of vomiting took place, attended with the discharge of the false membrane; and from this time the disease was completely subdued.—Subsequently, Dr. Serlo has employed the article, conjointly with antiphlogistics, in about forty cases, out of which number he has only lost four.—In cases of laryngo-tracheitis of children, simulating croup, the sulphate of copper is not less useful.—As an emetic it may be given as follows:

℞ Sulphat. cupri. gr. iij.
Sach. Alb. gr. vj. M.

One of the following powders may then be given every two hours.

℞ Sulph. cupri. gr. ij.
Sach. Alb. — ʒ;. M. et divid. in chart. viij.

Doctor Malin has not been less successful, with the article, combined with other means, in the treatment of croup.—*Revue Medicale, Mai*, 1834.

14. *Cancer of the Diploë.*—A female subject with cancer of the breast, in whom the two thigh bones were on one occasion fractured by a very slight cause, was presented to M. Tessier, with cancerous tumours developed in the interior of the medullary canal of each femur; the sides of the osseous cylinder were reduced to an extreme thinness and fragility. The bones of the cranium presented also several cancerous tumours at different stages of development, but which all appeared to have their origin in the diploë.—*Dublin Journal, July* 1834, *from Revue Médicale.*

VARIETIES.

We learn with much pleasure, that Dr. W. P. Dewees has been appointed to the Professorship of Midwifery, in the University of Pennsylvania, rendered vacant by the resignation of Professor James, who after having filled the chair with honor to himself, and great advantage to the numerous classes of students who have resorted to the Institution, has thought proper to retire on account of the infirmities of age. We think the trustees have done well to appoint Dr. Dewees. He has for several years labored with great ability for the University, in the capacity of Adjunct Professor, and no one certainly is more competent to give valuable instruction in his department.

We would respectfully suggest to some of our cotemporaries, that when they copy our foreign extracts, it is but just they should acknowledge their obligation to our pages. Although this is the established rule amongst journalists, we should not have noticed any departure from it, so far as we are ourselves concerned, but we have seen our extracts from German journals, &c. copied, and credit given to some of our cotemporaries, who had selected them from our pages

We have been reluctantly obliged to omit, for want of room, a very interesting communication, on the subject of quack medicines, which one our contributors has obligingly prepared for our pages. It will appear in our next. In the mean time, we have to inform certain *good souls* about town, who seem to take a special interest in drugging the community with Morrison's pills, and other precious quack nostrums, that they shall hear from us.

We feel grateful for the flattering reception of our first number, and in return, pledge ourselves to use every exertion, to make it deserving the favorable opinion and support of the medical profession.

Books and Periodicals received for our Journal within the last month.

An Inquiry into the Claims of Dr. William Harvey to the discovery of the circulation of the blood, with a more equitable retrospect of that event, to which is added, an introductory lecture, delivered cn the 3d November, 1829, in vindication of Hippocrates from sundry charges of ignorance preferred against him by the late professor Rush. By John Redman Coxe, M.D. Professor of Mat. Med. and Pharmacy in the University of Pennsylvania. 8vo. Philadelphia, 1834. (*From the author.*)

A compendium of Operative Surgery for the use of students, illustrated with engravings. By Thomas L. Ogier, M.D., Lecturer on Anatomy and Operative Surgery, and Thomas M. Logan, M.D., Lecturer on Materia Medica and Therapeutics. Part i. 4to. Charleston, S. C. 1834. (*From the authors.*)

Anatomisk Beskrivelse over Fem Menneskelige Misfostere; af Etatsraad J. D. Herholdt. Dr. og Prof. Med. &c. med Tolv, Kobbertavler. Kiöbenhavn, 1829.

Bibliothek for Læger, Udgivet of Direction for det classenske Literatur—Selskab; Redigeret of dens Medlem C. Otto, M.D. Professor ved Kiöbenhavn's Universitat. No. 1, 1834. (*From Professor Otto, in exchange.*)

The London Medical Gazette for July and August, 1834.

The Lancet for July and August, 1834.

The London Medical and Surgical Journal for July and August, 1834.

The Boston Medical and Surgical Journal, Nos. 10 & 11, for October. (*In exchange.*)

The Transylvania Journal of Medicine and the Associate Sciences for July, August and September, 1834. (*In exchange.*)

The Medico-Chirurgical Review, for July, 1834.

Annales de la Medécine Physiologique, par F. J. V. Broussais, for January, February, March, April, and May. (*In exchange.*)

Revue Médicale Fraçaise et Etrangère, for May and June. (*In exchange.*)

The Dublin Journal of Medical and Chemical Science, No. xvi. for 1834.

Journal Hembdomadaire des progrès des Sciences et Institutions Medicale, Nos. 21, 22, 23, 24, 25 & 26 for 1834. (*In exchange.*)

Journal des Connaissances Medico-Chirurgicales, Nos. 10 & 11, for June and July, 1834. (*In exchange.*)

Journal de la Medécine Homœopathique, Nos. 10, 11 & 12. (*In exchange.*)